Local Planning for Coastal Nonpoint Source Pollution

Volume 1

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Tallahassee, Florida
December 1993

[illegible] for this project were provided by the Department of Community Affairs, Florida Coastal Management [illegible]gram, using funds made available through the NOAA under the Coastal Zone Management Act of 1972, as [illegible]ended.

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Executive Summary

This is the first in a two-part series of reports on coastal nonpoint source pollution issues prepared for the Florida Department of Environmental Protection (DEP) under the state's coastal management program. This report has been prepared by two university study teams — one from Florida State University and one from Florida Atlantic/Florida International University. This report begins a discussion of how local comprehensive plans can be used to address nonpoint source pollution problems in Florida. A follow-up report will be prepared during the Spring of 1994 to extend this discussion. Volume 2 in this report series will discuss how local government land development regulations can also be used to address coastal nonpoint pollution problems in Florida.

Under Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990, the DEP must prepare a state coastal nonpoint source (NPS) program. The DEP will inventory and assess existing NPS programs in Florida to determine their effectiveness, and may recommend improvements. The assessment must address five categories of nonpoint sources of pollution identified by the U.S. Environmental Protection Agency (EPA):

- agriculture
- forestry
- urban
- marinas and recreational boating, and
- hydromodification projects.

Existing NPS programs at the state, regional, and local government levels will be studied as part of this process, including those identified in Florida's EPA-approved Section 319 nonpoint source management program.

This report addresses how local government comprehensive plans may be used to help meet the requirements of the federal 6217 program. It contains a preliminary analysis of local comprehensive plans in fourteen cities and counties chosen from two study areas — Tampa Bay and the Indian River Lagoon.

The research teams inventoried comprehensive plans in each of these jurisdictions and catalogued all goals, objectives, and policies that seemed to address five types of nonpoint source pollution that are of great interest to EPA, namely urban, agricultural, forestry, marinas and recreational boating, and hydromodification issues. Each such local planning goal, objective and policy was further compared to a list of management measures that EPA will ultimately use to judge the effectiveness of managing nonpoint source pollution problems in coastal states.

The second phase of this research project will extend this examination of local plans to the actual land development regulations that carry out the plans in these same cities and counties. These evaluations of local comprehensive plans can be used to help judge whether local comprehensive plans and their implementing regulations can be used effectively to manage nonpoint source pollution problems in other areas of the state.

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Chapter 1

Introduction

The Florida Department of Environmental Protection (DEP) is responsible for preparing a coastal nonpoint source (NPS) program for the State of Florida pursuant to the goals and objectives of Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990. The DEP's work plan for accomplishing this includes an inventory and assessment of existing NPS programs in Florida to determine their effectiveness, together with any recommended improvements. The assessment at a minimum will cover five general categories of nonpoint sources of pollution identified by the U.S. Environmental Protection Agency (EPA):

- agriculture
- forestry
- urban
- marinas and recreational boating, and
- hydromodification projects.

Existing NPS programs at the state, regional, and local government levels will be studied as part of this process, including those identified in Florida's EPA-approved Section 319 nonpoint source management program.

At the local government level, important components of this assessment process involve local government comprehensive plans and land development regulations prepared pursuant to the state's planning and growth management system. Under the Local Government Comprehensive Planning and Land Development Regulation Act of 1985 (Chapter 163, Part II, Florida Statutes), each city and county in Florida has adopted a local comprehensive plan, generally during a 3-year period from July 1, 1988 to July 1, 1991. Local comprehensive plans must address a wide range of issues, from land use, transportation, housing and public facilities to conservation, recreation and open space, capital improvements and coastal management.

Adoption of local land development regulations follows the adoption of a local comprehensive plan and serves as a principal means of implementing the plan. Local comprehensive plans and land development regulations can be a significant and powerful tool for local governments to address a broad range of land use and environmental quality problems, including the regulation and management of nonpoint source pollution to improve local water quality conditions.

This report summarizes the first phase of a two-part investigation into the extent to which Florida's local planning and growth management programs can be used to help the State of Florida meet the requirements for federal approval under the 6217 program. It is prepared under contract with the Florida Department of Environmental Protection, which is responsible for developing the state's overall 6217 program. Funding was provided by the Florida Department of Community Affairs through the coastal management program and the National Oceanic and Atmospheric Administration (NOAA). The second phase of the investigation is scheduled for completion in the Spring of 1994.

Project Approach

The overall study involves an in-depth examination of 14 sets of local comprehensive plans and land development regulations within two of Florida's largest and most important estuaries, Tampa Bay and the Indian River Lagoon. The local jurisdictions involved in this study are:

Gulf Coast (Tampa Bay)

Counties	Municipalities
1. Manatee	1. Palmetto
2. Hillsborough	

Atlantic Coast (Indian River Lagoon)

Counties	Municipalities
1. Palm Beach	1. Jupiter
2. Martin	2. Jupiter Inlet Colony
3. St. Lucie	3. Tequesta

4. Jupiter Island
5. Ocean Breeze Park
6. Sewall's Point
7. Stuart
8. Fort Pierce

The two study areas chosen for this project are designated for special management attention by the federal government under the National Estuary Program (NEP). Both contain several state-designated aquatic preserves within their overall watershed boundaries. Both waterbodies have also been targeted for special protection and restoration efforts under the state's Surface Water Improvement and Management (SWIM) Act.

During 1992-93 the Homer Hoyt Center at Florida State University and the FAU/FIU Joint Center for Environmental and Urban Problems examined local government comprehensive plans in these two major coastal areas to determine their consistency with SWIM plans prepared by the water management districts and with aquatic preserve plans prepared by the Florida Department of Natural Resources (DNR). The researchers defined the scope of the previous investigation by first identifying three aquatic preserve areas to measure consistency among the three different types of planning documents. In the Tampa Bay area, the study focused on Cockroach Bay and Terra Ceia Aquatic Preserve plans and the associated local government comprehensive plans from Hillsborough and Manatee counties as well as the City of Palmetto. In the Indian River Lagoon area, the study concentrated on a portion of the lower lagoon where a new prototype plan had been prepared by DNR for the area between Jenson Beach and Jupiter Inlet. The present study area is an outgrowth of this previous research project.

The evaluations of local comprehensive plans reported in this study can be used to help judge whether local comprehensive plans and their implementing regulations can be used effectively to manage nonpoint source pollution problems in other areas of the state. Shortfalls and deficiencies in local programs examined in this study will no doubt reflect upon similar needs to strengthen local planning and land development regulations in other parts of the state.

Project Organization

As mentioned earlier, the overall project is divided into two phases. Phase One work commenced during November 1993 and will be completed by December 31, 1993. Phase Two work will be accomplished during the Spring of 1994. The objectives of the overall investigation are to:

1. Determine the geographic and jurisdictional scope of local comprehensive plans and land development regulations within the two study areas with respect to the following categories of nonpoint source activities:
    - agriculture
    - forestry
    - urban
    - marinas and recreational boating, and
    - hydromodification projects.

2. Determine the effectiveness of local comprehensive plans and land development regulations according to the following measures:
    - scope of the program
    - monitoring and enforcement procedures
    - availability of resources
    - ability to implement best management practices

3. Determine whether the measures are enforceable as defined by guidance provided by the 6217 program.

In Phase One, the following tasks were completed and are documented in this report:

Task 1 - Analyze all local comprehensive plans in the two study areas regarding nonpoint source pollution issues, and document all existing objectives and policies that relate to agriculture, forestry, urban, marinas and recreational boating, and hydromodification sources of nonpoint pollution.

Task 2 - Travel to and consult with the staffs of water management districts associated with the two study areas about their jurisdiction and oversight of nonpoint source pollution within their district.

Task 3 - Analyze all comprehensive plan amendments relative to whether, and the extent to which, they relate to nonpoint source pollution issues.

Following this introductory chapter are four more chapters that comprise the balance of this report. In Chapter 2, there are a series of matrices for quickly comparing the provisions of all fourteen local government comprehensive plans examined during Phase One against the presence or absence of 53 Management Measures provided by EPA for the areas of agriculture, forestry, urban, marinas and recreational boating, and hydromodification. The information contained in these matrices will be analyzed further during Phase 2 of the research project.

Chapter 3 contains the text of numerous local planning goals, objectives, and policies that relate to nonpoint source pollution. This information is taken directly from the comprehensive plan of each local government located within the two study areas. Later on in Chapter 5, there is a review of all comprehensive plan amendments that relate to local issues involving nonpoint sources of pollution.

Additionally, Chapter 4 of the report summarizes the results of two visits made by the project team to the offices of the Southwest Florida Water Management District and the South Florida Water Management District. These meetings provided useful insight into the districts' views of local progress towards managing nonpoint sources of pollution, as well as information about planning and permitting activities related to nonpoint source pollution abatement at the water management district level.

Phase Two of the project will extend this analysis of local government plans into the question of how they are being implemented. The land development regulations of each local jurisdiction in the two study areas will be analyzed to determine how they address the five issues of primary concern to EPA, namely, agriculture, forestry, urban, marinas and

recreational boating, and hydromodification sources of nonpoint pollution. In a future report for Phase Two, the project investigators will address the implementability, economic feasibility, and enforceability of local government planning policies and land development regulations as they relate to managing nonpoint sources of pollution in each of the fourteen local governmental jurisdictions.

As in the case of Phase One, the Phase Two report will compare the strength and direction of local government land development regulations with the Management Measures outlined by EPA for the Section 6217 program. The report will also assess issues of coordination mechanisms and funding availability for local government pollution control programs. Finally, the Phase Two report will include conclusions from the study team's assessment of the extent to which Florida's local planning and growth management program can be used to help meet the enforceable policies requirement for the state's nonpoint source pollution program called for by Section 6217.

Chapter 2

Local Plans and EPA 6217 Management Measures

This chapter provides a brief overview of material contained in the 14 local comprehensive plans that were reviewed for this project. It begins to suggest how local comprehensive plans might relate to management measures developed by the U.S. Environmental Protection Agency for preventing or abating nonpoint sources of pollution in coastal waters. In essence, it is a "super summary" of more detailed information about local planning policies related to nonpoint source pollution that is found in later chapters, principally Chapter 3.

The reason for this is that in Chapter 3, the investigators lay out the results of a detailed examination of each of the 14 local comprehensive plans involved in this study. Every goal, objective or planning policy that might in some way contribute towards managing local nonpoint pollution problems is identified in Chapter 3 and categorized according to 5 major areas of concern to EPA, e.g., agriculture, forestry, urban, marinas and recreational boating, and hydromodification sources of nonpoint pollution.

Later on, during Phase 2 of this investigation, the land development regulations that help implement each comprehensive plan will also be closely examined. This process may add to or subtract from the lists of local planning policies that are contained in this report, as the investigators gain a better understanding of how local government planning policies for managing nonpoint source pollution are carried out in actual practice.

At the same time, the reader of this report is cautioned that the contents of these matrices, while interesting to see at a glance how a number of matters of concern to EPA may or may not be addressed at the local government planning level, are incomplete in another sense. During Phase 2 the investigators will travel to each local government jurisdiction involved in the study area and talk with planners, engineers, and other local staff involved with local nonpoint source management programs. This process is expected to add greatly to the body of knowledge on how various local planning and regulatory schemes can be reliably counted upon by the State of Florida when it prepares its state program for submittal to EPA and NOAA.

As a result, these matrices will be reviewed again during Phase 2 of this investigation and will no doubt change in at least some respects. Nonetheless, they begin to show across a number of local jurisdictions just where local comprehensive plans within the two study areas are tending to address certain problems related to nonpoint source pollution, including many associated with land use and land development issues, and also where they tend not to address some issues at all.

Hillsborough and Manatee Counties and the City of Palmetto are presented together in the first set of matrices, representing the three local jurisdictions in the Tampa Bay study area. Following these are three sets of additional matrices that present similar information for the local government comprehensive plans in the Indian River Lagoon study area. With one exception (Sewell's Point), the information for all municipalities is presented together with the respective county. The 53 management measures are taken directly from the document entitled "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters," published by EPA in January 1990. For each comprehensive plan, the local government policies which may relate to each management measure are referenced by policy number. If no related policy was found, the matrix entry is left blank. At this point, these matrices are a relatively broad and inclusive measure indicating some local government attention to EPA's 6217 management measures.

EPA 6217 Management Measures
Analysis of Local Comprehensive Plan Contents
Tampa Bay Study Area

MANAGEMENT MEASURE	Hillsborough County	Manatee County	City of Palmetto
MANAGEMENT MEASURES FOR AGRICULTURE			
Erosion and Sediment Control	Future Land Use: policy A-1.2, A-3.5, C-37.4 & 6, also obj. A-8 Conservation: policy P11.2 & P2.2 Coastal Mgt.: obj. 5 & policy 5.1	2.3.1; 2.3.5	
Management Measure for Facility Wastewater and runoff from Confined Animal Facility Management (Large Units)		2.3.5.1 & 2	
Management Measure for Facility Wastewater and Runoff from Confined Animal Facility Management (Small Units)		2.3.5.1	
Nutrient Management Measure	Conservation/ Aquifer Recharge: policy 1.8	2.3.5.3&4	
Pesticide Management Measure	Future Land Use: policy B-9.1	2.3.5.3&4	
Grazing Management Measure		2.3.5.3&4	
Irrigation Water Management Measure		2.3.1	
MANAGEMENT MEASURES FOR FORESTRY		May apply to all forestry measures: 2.3.4.6 3.3.5.3 (verify)	
Preharvest Planning		?	
Streamside Management Areas (SMAs)		?	
Road Construction/Reconstruction	Transp.: policy P1.7.2	?	
Road Management	Transp.: policy P1.7.2	?	
Timber Harvesting		?	
Site Preparation and Forest Regeneration		?	
Fire Management		?	
Revegetation of Disturbed Areas		?	
Forest Chemical Management		?	
Wetlands Forest Management		?	

MANAGEMENT MEASURE	Hillsborough County	Manatee County	City of Palmetto
MANAGEMENT MEASURES FOR URBAN AREAS			
New Development Management Measures	Conservation/ Aquifer Recharge: policy 6.13 and A-1.4 Future Land Use: obj. A-5	2.2.2.4.2 2.3.2 2.3.2.2 3.3.1.2 11.3.1.1,2&4 11.3.4.2	VII-42; 1.1.1 VII-2; 1.2.1 VII-37; 1.2.3
Watershed Protection Management Measures	Future Land Use: policy C-37-10	2.3.4&5 2.3.4.2,3,4,8, &11 3.2.1.1	
Site Development Management Measures	Future Land Use: policy A-1.4	2.3.4.2,8&11	VII-35; 1.1.3
Construction Site Erosion and Sediment Control Management Measure		2.6.1.1 3.1.1.6	VII-21; 1.7
Construction Site Chemical Control Management Measure		3.1.1.6	
Existing Development Management Measure	Conservation/ Aquifer Recharge: policy 2.10	3.3.3.1 11.3.3&5 11.4.1.3	VII-2; 1.2.2 VII-3; 1.2.6
New Onsite Disposal Systems Management Measure			
Operating Onsite Disposal Systems Management Measure			
Pollution Prevention Management Measure	Future Land Use: obj. C-37	11.3.4.2	
Management Measure for Planning, Siting and Developing Roads and Highways	Future Land Use: policy 30.2		
Management Measure for Bridges	Future Land Use: policy A.8.14		
Management Measure for Construction Projects	Transp.: policy 1.7.2		
Management Measure for Construction Site Chemical Control	Transp.: policy 1.7.2		
Management Measure for Operation and Maintenance	Transp.: policy 1.7.2		
Management Measure for Road, Highway, and Bridge Runoff Systems	Transp.: policy 1.7.2 Future Land Use: policy A.8.14	11.3.1.5	

MANAGEMENT MEASURE	Hillsborough County	Manatee County	City of Palmetto
MANAGEMENT MEASURES FOR MARINAS AND RECREATIONAL BOATING		4.2.1.4	
Marina Flushing Management Measure	Coastal mgt.: policy 7.6		
Water Quality Assessment Management Measure	Future Land Use: policy 7.7		
Habitat Assessment Management Measure	Conservation: policy 4.1	4.1.1.11	
Shoreline Stabilization Management Measure	Coastal mgt.: policy 5.1	4.3.3.7	
Storm Water Runoff Management Measure	Future Land Use: obj. 4 and policy C37.6		
Fueling Station Design Management Measure	Coastal mgt.: policy 7.9		
Sewage Facility Management Measure	San. Sewer & Solid Waste: obj. 4 & policy 4.4		
Solid Waste Management Measure	Future Land Use: policy C-1.3		
Fish Waste Management Measure			
Liquid Material Management Measure			
Petroleum Control Management Measure	Coastal mgt.: policy 7.9		
Boat Cleaning Management Measure			
Public Education Management Measure	Conservation: policy 2.12		
Maintenance of Sewage Facilities Management Measure			
Boat Operation Management Measure		4.2.1.5 7.2.1	
MANAGEMENT MEASURES FOR HYDROMODIFICATION: CHANNEL MODIFICATION, DAMS, AND STREAMBANKS AND SHORELINE EROSION			
Management Measure for Physical and Chemical Characteristics of Surface Waters		2.3.2.4	
Instream and Riparian Habitat Restoration Management Measure	Conservation: obj. 14 & policies 4.1 & 14.5		

MANAGEMENT MEASURE	Hillsborough County	Manatee County	City of Palmetto
Management Measure for Erosion and Sediment Control	Future Land Use: obj. A8 & policies A1.2, C-37.4 & 6 Conservation: policies 2.2 & 11.2 Coastal Mgt.: obj. 5 & policy 5.1	4.1.2.6	
Management Measure for Chemical and Pollutant Control			
Management Measure for Protection of Surface Water Quality and Instream and Riparian Habitat	Future Land Use: policy C37.6 Conservation: policy 3.8 Stormwater Mgt.: obj. 3, policies 2.8 & 2.12		VII-11; 1.7
Management Measure for Eroding Streambanks and Shorelines	Future Land Use: obj. 5, policies A1.2 & C37.4	11.4.1.3 4.3.3.7	

EPA 6217 Management Measures
Analysis of Local Comprehensive Plan Contents
Indian River Lagoon Study Area

MANAGEMENT MEASURE	Palm Beach County	Jupiter	Tequesta	Jupiter Inlet Colony
MANAGEMENT MEASURES FOR AGRICULTURE				
Erosion and Sediment Control	CN: 6-d			
Management Measure for Facility Wastewater and runoff from Confined Animal Facility Management (Large Units)				
Management Measure for Facility Wastewater and Runoff from Confined Animal Facility Management (Small Units)				
Nutrient Management Measure				
Pesticide Management Measure				
Grazing Management Measure				
Irrigation Water Management Measure				
MANAGEMENT MEASURES FOR FORESTRY				
Preharvest Planning				
Streamside Management Areas (SMAs)				
Road Construction/Reconstruction				
Road Management				

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
Timber Harvesting				
Site Preparation and Forest Regeneration				
Fire Management				
Revegetation of Disturbed Areas				
Forest Chemical Management				
Wetlands Forest Management				
MANAGEMENT MEASURES FOR URBAN AREAS				
New Development Management Measures	CM: A.1.b, A.1.c; CN: A.7.b, A.7.c	LU: 01.06.04.01	LU: 1.8, 1.3; CM: 5.1	PF: A4.2; CI: A2.1
Watershed Protection Management Measures	CN: A.3.b, A.3.c, A.4.c	PF: 04.01.06.01	LU: ob 12; CM: 5.4	PF: ob A5
Site Development Management Measures	CM: A.1.k, A.4.b; CN: A.3.g, A.4.a, A.5.a, A.5.e, A.7.d, A.8.b	LU: 01.06.01.04, 01.06.02.02; PF: 04.01.01.01, 04.01.03.01; CN: 06.01.05.01; CM: 05.01.04.04; CI: 09.01.02.01	LU: 12.1	PF: A5.1
Construction Site Erosion and Sediment Control Management Measure	CN: A.5.g			

MANAGEMENT MEASURE	Palm Beach County	Jupiter	Tequesta	Jupiter Inlet Colony
Construction Site Chemical Control Management Measure				
Existing Development Management Measure		LU: 1.6.2, 1.6.3	LU: 1.5.6, 1.6.1; PF: 1.2.2, 1.2.3, 1.3.4; CM: 2.2.1	
New Onsite Disposal Systems Management Measure	SS: 2-c	LU: 1.3.6	PF: 1.1.1, 1.1.3; CN: 2.5.2, 2.13.10	LU: 4.3; PF: 1.1, 1.5
Operating Onsite Disposal Systems Management Measure	SS: 5-b, 5-c		PF: 1.1.1, 1.1.7	LU: 4.3; PF: 2.1
Pollution Prevention Management Measure	CN: 6-b, 6-c	CN: 1.4.6	PF: 1.3.1	CM: 2.3
Management Measure for Planning, Siting and Developing Roads and Highways				
Management Measure for Bridges				
Management Measure for Construction Projects				
Management Measure for Construction Site Chemical Control				
Management Measure for Operation and Maintenance				
Management Measure for Road, Highway, and Bridge Runoff Systems				
MANAGEMENT MEASURES FOR MARINAS AND RECREATIONAL BOATING				
Marina Flushing Management Measure		CN: 1.4.21		
Water Quality Assessment Management Measure				

MANAGEMENT MEASURE	Palm Beach County	Jupiter	Tequesta	Jupiter Inlet Colony
Habitat Assessment Management Measure				
Shoreline Stabilization Management Measure				
Storm Water Runoff Management Measure				
Fueling Station Design Management Measure				
Sewage Facility Management Measure				
Solid Waste Management Measure				
Fish Waste Management Measure				
Liquid Material Management Measure				
Petroleum Control Management Measure				
Boat Cleaning Management Measure				
Public Education Management Measure				
Maintenance of Sewage Facilities Management Measure				
Boat Operation Management Measure				

MANAGEMENT MEASURE	Palm Beach County	Jupiter	Tequesta	Jupiter Inlet Colony
MANAGEMENT MEASURES FOR HYDROMODIFICATION: CHANNEL MODIFICATION, DAMS, AND STREAMBANKS AND SHORELINE EROSION				
Management Measure for Physical and Chemical Characteristics of Surface Waters				
Instream and Riparian Habitat Restoration Management Measure				
Management Measure for Erosion and Sediment Control		PF: 1.1.8; CN: 1.4.16, 1.4.19, 1.4.20; CM: 1.4.6, 1.5.9		
Management Measure for Chemical and Pollutant Control				
Management Measure for Protection of Surface Water Quality and Instream and Riparian Habitat		CM 1.5.5		
Management Measure for Eroding Streambanks and Shorelines		CN: 1.4.10, 1.4.12, 1.5.7; CM: 1.5.3	CN: 2.13.8	CN: 4.3

Key:

LU = Future Land Use Element

CN = Conservation and Open Space Element

CM = Coastal Management Element

PF = Public Facilities (Infrastructure Element)

IC = Intergovernmental Coordination Element

CI = Capital Improvement Element

SS = Sanitary Sewers Element (Palm Beach County Only)

AQ = Aquifer Recharge Element (Palm Beach County Only)

Note: All items represent policies unless otherwise indicated.

EPA 6217 Management Measures
Analysis of Local Comprehensive Plan Contents
Indian River Lagoon Study Area

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
MANAGEMENT MEASURES FOR AGRICULTURE				
Erosion and Sediment Control	CN: A.5.a, A.5.f, A.5.g			
Management Measure for Facility Wastewater and runoff from Confined Animal Facility Management (Large Units)				
Management Measure for Facility Wastewater and Runoff from Confined Animal Facility Management (Small Units)				
Nutrient Management Measure				
Pesticide Management Measure				
Grazing Management Measure				
Irrigation Water Management Measure				
MANAGEMENT MEASURES FOR FORESTRY				
Preharvest Planning				
Streamside Management Areas (SMAs)				
Road Construction/Reconstruction				
Road Management				

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
Timber Harvesting				
Site Preparation and Forest Regeneration				
Fire Management				
Revegetation of Disturbed Areas				
Forest Chemical Management				
Wetlands Forest Management				
MANAGEMENT MEASURES FOR URBAN AREAS				
New Development Management Measures	CM: A.1.b, A.1.c; CN: A.7.b, A.7.c	LU: 01.06.04.01	LU: 1.8, 1.3; CM: 5.1	PF: A4.2; CI: A2.1
Watershed Protection Management Measures	CN: A.3.b, A.3.c, A.4.c	PF: 04.01.06.01	LU: ob 12; CM: 5.4	PF: ob A5
Site Development Management Measures	CM: A.1.k, A.4.b; CN: A.3.g, A.4.a, A.5.a, A.5.e, A.7.d, A.8.b	LU: 01.06.01.04, 01.06.02.02; PF: 04.01.01.01, 04.01.03.01; CN: 06.01.05.01; CM: 05.01.04.04; CI: 09.01.02.01	LU: 12.1	PF: A5.1
Construction Site Erosion and Sediment Control Management Measure	CN: A.5.g			

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
Construction Site Chemical Control Management Measure				
Existing Development Management Measure	CM: A.3.b		LU: 1.3, 10.1	CS: A4.2; PF: A1.2
New Onsite Disposal Systems Management Measure	CM: A.1.d; PF: A.1.m, A.1.o, A.1.q	PF: 04.01.05.03		
Operating Onsite Disposal Systems Management Measure		PF: 04.01.05.04	CN: 1.5; CM: 5.2	
Pollution Prevention Management Measure	LU: G.1.d; CN: A.1.d, A.1.e, A.1.t	CM: 05.01.04.02	LU: 12.1; CN: 1.5	PF: A1.8
Management Measure for Planning, Siting and Developing Roads and Highways	TC: C.2.d			
Management Measure for Bridges	TC: C.2.c			
Management Measure for Construction Projects				
Management Measure for Construction Site Chemical Control				
Management Measure for Operation and Maintenance				
Management Measure for Road, Highway, and Bridge Runoff Systems	TC: C.2.e			
MANAGEMENT MEASURES FOR MARINAS AND RECREATIONAL BOATING			CM: 5.3	
Marina Flushing Management Measure	CM: A.4.c, A.5.d	CM: 05.01.04.05		CM: A4.6
Water Quality Assessment Management Measure	CM: A.5.d			CM: A2.2

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
Habitat Assessment Management Measure				
Shoreline Stabilization Management Measure	CM: A.5.d, A.5.e			CM: ob A5
Storm Water Runoff Management Measure				
Fueling Station Design Management Measure				
Sewage Facility Management Measure	CM: A.5.d, A.5.e			CM: A2.2
Solid Waste Management Measure				
Fish Waste Management Measure				
Liquid Material Management Measure	CM: A.5			
Petroleum Control Management Measure	CM: A.5			
Boat Cleaning Management Measure				
Public Education Management Measure	CM: A.4.f			
Maintenance of Sewage Facilities Management Measure				
Boat Operation Management Measure				

MANAGEMENT MEASURE	Martin County	Jupiter Island	Ocean Breeze Park	Stuart
MANAGEMENT MEASURES FOR HYDROMODIFICATION: CHANNEL MODIFICATION, DAMS, AND STREAMBANKS AND SHORELINE EROSION				CM: A4.5
Management Measure for Physical and Chemical Characteristics of Surface Waters				
Instream and Riparian Habitat Restoration Management Measure				
Management Measure for Erosion and Sediment Control	CM: A.4.b, A.4.g			
Management Measure for Chemical and Pollutant Control				
Management Measure for Protection of Surface Water Quality and Instream and Riparian Habitat	CM: A.4.b	CM: 05.01.04.03		
Management Measure for Eroding Streambanks and Shorelines	CM: A.4.b; CN: A.5.h; IC: A.3.g	CM: 05.01.04.03		

Key:

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Note: All items represent policies unless otherwise indicated.

EPA 6217 Management Measures
Analysis of Local Comprehensive Plan Contents
Indian River Lagoon Study Area

MANAGEMENT MEASURE	Sewall's Point		St. Lucie County	Ft. Pierce
MANAGEMENT MEASURES FOR AGRICULTURE			CN: 8.1.2.1.d	
Erosion and Sediment Control			CN: 8.1.2.1	CN: 6.1.2.1, 6.1.4.1
Management Measure for Facility Wastewater and runoff from Confined Animal Facility Management (Large Units)				
Management Measure for Facility Wastewater and Runoff from Confined Animal Facility Management (Small Units)				
Nutrient Management Measure				
Pesticide Management Measure				
Grazing Management Measure				
Irrigation Water Management Measure				
MANAGEMENT MEASURES FOR FORESTRY				CN: 6.1.2.1
Preharvest Planning				
Streamside Management Areas (SMAs)				
Road Construction/Reconstruction				
Road Management				

MANAGEMENT MEASURE	Sewall's Point		St. Lucie County	Ft. Pierce
Timber Harvesting				
Site Preparation and Forest Regeneration				
Fire Management				
Revegetation of Disturbed Areas				
Forest Chemical Management				
Wetlands Forest Management				
MANAGEMENT MEASURES FOR URBAN AREAS				
New Development Management Measures	LU: 3.1		LU: 1.1.9.10, 1.1.5.8	LU: 1.1.4.4; PF: 4.1.4.4; CM: 5.1.12.5, 5.1.12.3
Watershed Protection Management Measures	LU: 3.1, 3.2		LU: 1.9.7; PF: ob 6C.1.3, 6C.3.1.6	
Site Development Management Measures			LU: 1.1.9.8	PF: 4.1.6.9; CN: 6.1.2.6; CM: 5.1.1.8
Construction Site Erosion and Sediment Control Management Measure	CM: 4.1		LU: 1.1.9.8	PF: 4.1.6.9; CN: 6.1.4.1
Construction Site Chemical Control Management Measure				
Existing Development Management Measure	LU: 2.1, 3.1		CM: 7.1.4.2, 7.1.4.4, 7.1.4.10	PF: 4.1.6.6; CM: 5.13.1
New Onsite Disposal Systems Management Measure	LU: ob 1.0		LU: 1.1.5.10	PF: 4.1.1.2

MANAGEMENT MEASURE	Sewall's Point		St. Lucie County	Ft. Pierce
Operating Onsite Disposal Systems Management Measure	LU: 9.5		PF: 6A.1.4.1	PF: 4.1.1.2
Pollution Prevention Management Measure			LU: 1.1.9.10; CI: 11.1.1.15	LU: 4.1.6.9; CM: 5.1.6.1
Management Measure for Planning, Siting and Developing Roads and Highways				
Management Measure for Bridges				
Management Measure for Construction Projects			LU: 1.1.9.8	
Management Measure for Construction Site Chemical Control				
Management Measure for Operation and Maintenance			LU: 1.1.9.10	
Management Measure for Road, Highway, and Bridge Runoff Systems				
MANAGEMENT MEASURES FOR MARINAS AND RECREATIONAL BOATING	CM: 6.4		CM: 7.1.7.3	
Marina Flushing Management Measure				CM: 5.1.3.3
Water Quality Assessment Management Measure			CM: 7.1.7.1	IC: 8.1.2.2
Habitat Assessment Management Measure				CM: 5.1.1.8
Shoreline Stabilization Management Measure				CN: 6.1.2.4; CM: 5.1.1.8
Storm Water Runoff Management Measure				

MANAGEMENT MEASURE	Sewall's Point		St. Lucie County	Ft. Pierce
Fueling Station Design Management Measure				CM: 5.1.1.11
Sewage Facility Management Measure				CM: 5.1.1.11
Solid Waste Management Measure				
Fish Waste Management Measure				
Liquid Material Management Measure				
Petroleum Control Management Measure				CM: 5.1.1.11
Boat Cleaning Management Measure				
Public Education Management Measure				
Maintenance of Sewage Facilities Management Measure				CM: 5.1.1.11
Boat Operation Management Measure				
MANAGEMENT MEASURES FOR HYDROMODIFICATION: CHANNEL MODIFICATION, DAMS, AND STREAMBANKS AND SHORELINE EROSION				
Management Measure for Physical and Chemical Characteristics of Surface Waters				CM: 5.1.3.4, 5.1.12.7,
Instream and Riparian Habitat Restoration Management Measure				CM: 5.1.12.7

MANAGEMENT MEASURE	Sewall's Point		St. Lucie County	Ft. Pierce
Management Measure for Erosion and Sediment Control				
Management Measure for Chemical and Pollutant Control				PF: 4.1.6.6
Management Measure for Protection of Surface Water Quality and Instream and Riparian Habitat				
Management Measure for Eroding Streambanks and Shorelines				

Key:

LU = Future Land Use Element

CN = Conservation and Open Space Element

CM = Coastal Management Element

PF = Public Facilities (Infrastructure Element)

IC = Intergovernmental Coordination Element

CI = Capital Improvement Element

SS = Sanitary Sewers Element (Palm Beach County Only)

AQ = Aquifer Recharge Element (Palm Beach County Only)

Note: All items represent policies unless otherwise indicated.

Chapter 3

Content Analyses of Local Comprehensive Plans

Task 1. Analyze all local comprehensive plans in the 2 study areas regarding nonpoint source pollution issues, and document all existing objectives and policies that relate to agriculture, forestry, urban, marinas and recreational boating, and hydromodification nonpoint source pollution issues.

Work product 1.1 — draft summary report

A major research task in Phase 1 of this project entailed the detailed examination of the adopted local comprehensive plan of each of the 14 cities and counties that are located within the Tampa Bay and Indian River Lagoon study areas.

In the Tampa Bay area, the study focused on the local government comprehensive plans from Hillsborough and Manatee counties as well as the City of Palmetto. In the Indian River Lagoon area, the study concentrated on the local comprehensive plans from the following jurisdictions:

Counties	Municipalities
1. Palm Beach	1. Jupiter
2. Martin	2. Jupiter Inlet Colony
3. St. Lucie	3. Tequesta
	4. Jupiter Island
	5. Ocean Breeze Park
	6. Sewall's Point
	7. Stuart
	8. Fort Pierce

The following tables present the status of the analysis of each of the local government comprehensive plans to date. For the Tampa Bay study area, this consists of three tables that contain goals, objectives and policies that pertain to nonpoint source pollution issues in Hillsborough and Manatee Counties and the City of Palmetto. Following these three tables are eleven additional ones that present similar information for the local government comprehensive plans of cities and counties in the Indian River Lagoon study area.

Table 3.1 — Hillsborough County

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Hillsborough County	Urban	Future Land Use
		Obj. A-1. Development orders shall not be issued unless development is compatible with physical conditions of land and mitigation of adverse impacts affecting health, safety & welfare is conducted.
		Pol. A-1.2. Soil capability analyses for flood hazards, stability, etc. shall be considered for new development.
		Pol. A-3.2. No new, expansion, nor replacement development shall be permitted within Natural Preservation Areas (excepting gov't development in the public interest with mitigated impacts).
		Pol. A-3.5. LDRs shall address & limit activities having potential to contaminate soil, water and crops.
		Obj. A-8. Require new development to mitigate adverse impacts upon natural environmental systems as described & required within the Conservation and Aquifer Recharge and Coastal Management elements of comprehensive plan.
		Pol. A-8.1. Encourage future population growth into existing urban areas.
		Pol. A-8.2. Require new development to protect Conservation and Preservation areas as defined in the Conservation and Aquifer Recharge element.
		Pol. A-8.9. Utilize public lands for multiple uses (e.g., parks, surface water management systems, natural habitats.)
		Pol. A-8.13. Preserve wetlands by discouraging use of mitigation, dredge & fill, and similar development activities by revising LDRs.
		Pol. A-8.14. Require new roadways, interchanges or bridge designs undergo an environmental assessment.
		Pol. 27.2. Work with DNR, EPC, and county public health unit to identify sources of pollution responsible for closure of Cockroach Bay Aquatic Preserve to public shellfishing, and develop program to identify means of eliminating such sources.
		Pol. C-1.3. Prohibit any solid waste landfills and hazardous wastes facilities that may adversely affect rivers and tributaries.
		Obj. C-30. Regulations & Performance Standards. Shall be developed to protect water quantity & quality, environmentally sensitive areas, wildlife habitats, rivers and creeks from degradation by development.
		Pol. C-30.2. Require location and design of public roads and bridges within riverine habitats and vegetation communities.

Hillsborough County	Urban	Pol. C-30.6. Restrict clearing or filling of natural plant communities within 50 feet of EPC jurisdictional line of rivers and creeks designed as river corridor overlay districts within 100 feet of MHW line of such rivers and creeks, with mitigation.
		Pol. C-35.2. Forbid all electrical power generating activities and construction in or through Cockroach Bay Aquatic Preserve and adjoining environmentally sensitive areas not included within electric power generating facilities boundaries, unless waived as rezoning or other conditions.
		Pol. C-35.3. Zoning approval of an electrical power generating facility adjacent to Cockroach Bay Aquatic Preserve is contingent upon absence of adverse impacts to Cockroach Bay Aquatic Preserve and adjoining environmentally sensitive areas.
		Obj. C-37. Identify geographic area by 1993 wherein discharges are very likely to affect Cockroach Bay. Once identified, new permitted discharges will be required to meet or exceed applicable federal, state, regional and local water quality standards. Initiate plan to address water quality & habitat restoration within Cockroach Bay Aquatic Preserve by the end of 1993.
		Pol. C-37.4. The county shall seek to establish a scientifically defensible protective buffer zone between the Cockroach Bay Aquatic Preserve and adjacent upland habitat land uses to prevent degradation of water quality and aquatic vegetative habitats as part of the Cockroach Bay overlay district study called for in policy C37-13.
		Pol. C-37.6. By the end of 1992, the county, in conjunction with the EPC, SWFWMD, DNR, TECO and other property owners will develop a program to identify drainage system alterations that facilitate water quality and habitat value improvements in the preserve. The area of concern shall receive priority as the county implements its stormwater management basin studies. The county will utilize a variety of mechanisms, such as the use of natural plant communities for the treatment of stormwater, detention of stormwater, and purchase of lands by the Environmental Lands Acquisition and Protection Program (ELAPP) for multiple use as wildlife habitat and stormwater management.
		Pol. C-37.8. The county will request the ELAPP program to purchase suitable parcels in the area of concern and incorporate site restoration projects that achieve water quality and/or habitat benefits to the preserve.
		Pol. C-37.10. By the end of 1992, the county will encourage all appropriate agricultural or construction operations within the Cockroach Bay drainage basin to develop and apply an SCS soil conservation plan and implement BMP's. Upon completion of the county's stormwater management master plan for this area, the county will require the use of BMP's.

Hillsborough County	Urban	Pol. C-37.11. By the end of 1993, the county, in cooperation with the EPC, the Hillsborough County public health unit and other appropriate entities, will undertake a study to evaluate the impact of existing septic systems on water quality in the area of concern. If warranted the county will initiate a program, by the end of 1995, to address and fund timely remediation of any identified water quality problems to the extent reasonably feasible.
		Infrastructure
		Sanitary sewer/solid waste, Obj. 4. Provide collection, transmission and wastewater treatment capacity to correct current deficiencies and meet projected demands based on meeting or exceeding adopted LOS through 1995.
		Sanitary sewer/solid waste, Pol. 4.4. Eliminate interim wastewater treatment plants as capacity becomes available in the county system.
		Sanitary sewer/solid waste, Pol. 4.8. Prohibit new development from using septic tank systems in the coastal high hazard areas (exceptions provided)
		Sanitary sewer/solid waste, Pol. 7.1. Continue to require septic tank systems connections to the county where available unless due hardship is proven.
		Stormwater management, Pol. 1.1. By FY96, the comprehensive countywide stormwater management master plan will be completed. All individual subbasin/watershed stormwater management master plans, which collectively will comprise the comprehensive stormwater management master plans, shall be initiated no later than FY94.
		Stormwater management, Pol. 1.3. Individual subbasin/watershed stormwater management master plans will be developed to the levels of detail necessary to address the needs generated by the corresponding individual levels of existing population and expected growth. All stormwater management master plans will include determinations of the environmental consequences of any proposed capital improvements and will be developed under the philosophy of maximizing the use of existing facilities.
		Stormwater management, Pol. 2.6. Only those stormwater management facility improvements projects included in the stormwater management capitol improvement plan will be implemented, unless actual significant flooding conditions dictate the immediate need to implement other stormwater management improvement projects.
		Stormwater management, Pol. 2.8. Total flood volume compensation will continue to be required for new developments which encroach into and displace 100-year flood storage or floodplain areas. Further, by FY91 a program to control encroachment within the 100-year flood conveyance areas will be developed and implemented.

Hillsborough County	Urban	Stormwater management, Pol. 2.10. By FY92, a program to improve groundwater recharge through the use of private and public stormwater management facilities will be developed and implemented. This program may require, among other things, that predevelopment groundwater recharge volumes and rates be maintained on site after development, if the site is located in an area of known or identified average annual aquifer recharge potential of at least two surface-inches of water; and will include restrictions on the lowering of groundwater levels to meet stormwater management regulations. In the interim, new development will be encouraged to consider retention of stormwater rather than detention in those areas.
		Stormwater management, Pol. 2.11. New development will continue to be encouraged, through application of existing local regulations, to maintain, with minimal disturbance to natural characteristics, those streams, lakes, wetlands, and estuaries for which stormwater conveyance and/or attenuation potential is significant. By FY92, a program to improve wetland preservation and restoration through the use of public and private stormwater management facilities shall be developed and implemented. This program will include restrictions on the lowering of groundwater levels near wetlands in connection with the construction of stormwater conveyance systems.
		Stormwater management, Pol. 2.12. New development will continue to be required to provide stormwater management systems which meet or exceed the county's stormwater management regulations
		Stormwater management, Pol. 2.15. The use of detention facilities will be the preferred alternative to improving conveyance to alleviate flooding problems, where physically and environmentally practical and economically feasible. All flood control projects will seek to minimize, to the greatest extent practicable, impacts wetland habitat, water quality and groundwater recharge functions. Where impacts are unavoidable, the projects will include measures to compensate for these lost functions.
		Stormwater management, Obj. 3. Stormwater management systems and facilities shall be operated and maintained in a manner which will support the continued provision of the adopted level of service standards.
		Stormwater management, Obj. 4. Identify and evaluate the sources of water quality degradation which are released to stormwater runoff.
		Stormwater management, Pol. 4.4. Beginning in FY92 stormwater quality data will be collected from predominately agricultural areas, and assessed to determine significant problem areas.
		Stormwater management, Pol. 4.5. Initiate NPDES permit acquisitions with USEPA or its formal designee.
		Stormwater management, Pol. 5.1. Develop/implement program to improve problem areas; BMP's will be used to minimize poor water quality runoff to ground and surface waterbodies.

Hillsborough County	Urban	Stormwater management, Pol. 5.2. All new developments shall continue to provide stormwater treatment facilities which meet or exceed appropriate local, state, and federal regulations.
		Stormwater management, Pol. 5.3. Require appropriate existing development planned for expansion, modification and/or replacement to provide some effective form of stormwater treatment.
		Stormwater management, Pol. 5.4. Include use of wetlands for stormwater treatment, pending pretreatment in wetland preservation and restoration prog. in policy 2.11.
		Conservation
		Pol. 2.5 (see Coastal Pol. 1.5). Initiate Interlocal Agreement to maintain or expand water quality monitoring program.
		Pol. 2.6. Provide improved domestic wastewater treatment service to developed areas where persistent water quality problems are attributable to poorly functioning septic tank systems and where economically feasible.
		Pol. 2.7. Develop scientifically defensible siting criteria, performance standards, and density limitations for septic tank systems with special criteria for siting adjacent to class I, II and Outstanding Florida Waters.
		Pol. 2.9. Request local and state agencies to improve monitoring and compliance enforcement of point and nonpoint discharges.
		Pol. 2.10 (see Coastal Pol. 1.11). Require existing development planned for expansion, modification and/or replacement to provide stormwater treatment/improvement, where lacking, and retrofit of stormwater treatment facilities in urban areas.
		Pol. 2.11. Monitor emerging stormwater treatment and BMP techniques and practices and cooperate with SWFWMD to ensure water quality objectives are met through methodologies.
		Pol. 2.12. Provide public education for homeowners which addresses impacts on surface waters of pesticides and fertilizers.
		Pol. 3.1. Continue to conserve and protect wetlands during the development review process, allowing encroachment as a last resort.
		Pol. 3.4. Request appropriate environmental regulatory agencies to develop unified, coordinated wetlands compensatory & restoration program.
		Pol. 3.6. Promote use of native plants for stormwater treatment.
		Pol. 3.8. Initiate an interlocal agreement with SWFWMD to ensure that minimum freshwater flows are scientifically determined and maintained to support natural optimal diversity and productivity in estuarine wetlands.
		Pol. 4.1. Amend floodplain regulations by 1995 to protect wildlife habitat and natural floodwater assimilation capacity.

Hillsborough County	Urban	Pol. 4.2. Continue to prohibit unmitigated encroachment into 100-year floodplains.
		Pol. 8.3. Continue to enforce mining ordinance to prohibit mining within 25 year floodplains.
		Obj. 14. Protect significant wildlife habitat and prevent any further net loss of essential wildlife habitats.
		Pol. 14.5. Develop/implement comprehensive program to conserve & protect significant wildlife habitats from development activity.
		Pol. 19.1. Determine construction setbacks and buffer distances from wetlands, floodplains, and waterbodies and integrate into LDRs and zoning codes where necessary.
		Pol. 19.5. Review and amend LDRs to better address cumulative and environmental impacts.
		Coastal Management
		Pol. 1.1 Not support lowered surface water quality standards and classification.
		Pol. 1.7. Provide improved domestic wastewater treatment service to coastal areas where water quality problems are attributable to poorly functioning septic treatment systems.
		Pol. 1.9. Request local and state agencies to improve monitoring & compliance enforcement of point and nonpoint source discharges to Tampa Bay and tributaries.
		Obj. 2 (see also Obj. 3, Conservation). No net loss of wetlands in county coastal area; mandated measurable annual increase in restored acreage.
		Pol. 2.1. Continue conservation & protection of tidal wetlands, prohibit unmitigated encroachments.
		Pol. 2.2. Prohibit channelization or hardening of coastal shorelines and tidal creeks, except in cases of overriding public interest.
		Pol. 2.4. Request regulatory agencies to develop unified & coordinated wetland mitigation and restoration project.
		Pol. 2.5. Initiate interlocal agreement to maintain minimum freshwater flows in rivers and streams.
		Pol. 2.6. Prohibit development activities on submerged land containing significant seagrass habitat, and seek to restore seagrass coverage.
		Pol. 2.7. Amend LDRs to require preservation of native upland plant communities necessary to buffer coastal wetlands.
		Pol. 2.8. Initiate interlocal agreement with Tampa Port Authority to restrict coastal area dredge & fill to channel maintenance, activities associated with water dependent uses, & environmental restoration with accompanying criteria.

Hillsborough County	Urban	Obj. 3. Maintain & enhance abundance & diversity of living marine resources in Tampa Bay.
		Pol. 3.2. Coordinate with and support appropriate regulatory agencies to ensure land developments within the coastal area discharging into receiving waters into conditionally approved or approved DNR shellfish harvesting area. Demonstrate nondegradation of water quality.
		Obj. 5. The county shall stabilize those man-made beaches prone to erosional problems and shall only support development of man-made beaches in environmentally-acceptable locations.
		Pol. 5.1. Assess present condition and erosional trends of significant public beaches. Develop estuarine beach and enhancement program.
		Pol. 5.3. Oppose destruction or degradation of intertidal/subtidal vegetative communities to develop new manmade estuarine beaches.
		Pol. 6.7. Prohibit septic tanks within coastal high hazard areas.
		Obj. 7. Give priority to locating water dependent/related land uses along shoreline of coastal area.
		Pol. 7.1. Amend the future land use element and map to create marine related land use category.
		Pol. 7.4. Water-related land uses shall not be developed by dredge & fill wetlands or natural shoreline.
		Pol. 7.8. Concentrate marine service land uses around existing marinas.
		Pol. 10.2. Publicly-funded infrastructure shall not be constructed within the coastal high hazard area unless retrofitting stormwater management facilities for water quality enhancement of stormwater runoff.
		Pol. a-8.7. Require stormwater management systems be designed to reduce pollution through compliance with regional and local filtration, retention and detention systems.
		Obj. c-1. Maintain or improve water quality in rivers which do not meet state water quality standards.
		Pol. c-1.1. Development shall provide storm management systems before discharge to rivers, including swales.
		Pol. c-21.1. Prohibit septic tanks and drainfields within 200 feet of the Little Manatee River & tributaries.
		Pol. c-37.3. Mitigate or restrict development likely to impact the Cockroach Bay Aquatic Preserve to prevent degradation through the development review process.

Hillsborough County	Urban	Transportation
		Pol. 1.7.2. All road construction projects shall meet or exceed adopted state or local stormwater retention and treatment requirements.
		Recreation and Open Space
		Pol. 1.4. Protect environmental and natural resources, energy efficiency and the orderly extension and expansion of other public facilities and services during the planning of parks and other recreational activities.
		Port
		Obj. 1. Ensure that expansion of existing or new siting of port or related facilities is coordinated with the future land use, coastal management, and conservation elements of the comprehensive plan.
		Pol. 1.1. Promote port activities development and resource protection consistent with Tampa port master plan and coordinated with Hillsborough County's comprehensive plan via interlocal agreement encouraging port authority to: A) assure coordination of submerged land management & permitting programs. B) maintain active membership with TBRPC/ABM & coordinate with Tampa Bay SWIM plan. C) continue support of estuarine resource restoration management program in the county. D) continue to develop mitigation projects minimizing adverse port development on natural resources. E) continue to implement consolidated berth maintenance dredging & disposal plan. F) develop a comprehensive resource management plan for incorporation into dredge plan. G) develop methods for managing bird nesting and feeding habitats on port authority-diked disposal islands. H) monitor & mitigate adverse impact on water quality from dredging projects. I) continue to augment HCEPC water quality monitoring program in inner harbor areas. J) incorporate stormwater treatment capability in port projects where feasible.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Hillsborough County	Agriculture	Future Land Use
		Pol. A-1.2. Soil capability analyses for flood hazards, stability, etc. shall be considered for new development.
		Pol. A-3.2. No new, expansion, nor replacement development shall be permitted within Natural Preservation Areas (excepting gov't development in the public interest with mitigated impacts).
		Pol. A-3.5. LDRs shall address & limit activities having potential to contaminate soil, water and crops.
		Pol. A-8.2. Require new development to protect Conservation & Protection areas as defined in the Conservation & Aquifer Recharge element.
		Pol. A-8.13. Preserve wetlands by discouraging use of mitigation, dredge & fill, and similar development activities by revising LDRs.
		Pol. A-8.14. Require new roadways, interchanges or bridge designs undergo an environmental assessment.
		Obj. B-9. Protect environmentally sensitive areas from degradation or damage from agricultural activities by establishing regulatory activities.
		Pol. B-9.1. Regulate the agricultural use of chemical pesticides.
		Pol. C-1.3. Prohibit any solid waste landfills and hazardous wastes facilities that may adversely affect rivers and tributaries.
		Pol. 27.2. Work with DNR, EPC, and county public health unit to identify sources of pollution responsible for closure of Cockroach Bay Aquatic Preserve to public shellfishing, and develop program to identify means of eliminating such sources.
		Obj. C-30. Regulations & Performance Standards. Shall be developed to protect water quantity & quality, environmentally sensitive areas, wildlife habitats, rivers and creeks from degradation by development.
		Pol. C-30.2. Require location and design of public roads and bridges within riverine habitats and vegetation communities.
		Pol. C-30.6. Restrict clearing or filling of natural plant communities within 50 feet of EPC jurisdictional line of rivers and creeks designed as river corridor overlay districts within 100 feet of MHW line of such rivers and creeks, with mitigation.
		Obj. C-37. Identify geographic area by 1993 wherein discharges are very likely to affect Cockroach Bay. Once identified, new permitted discharges will be required to meet or exceed applicable federal, state, regional and local water quality standards. Initiate plan to address water quality & habitat restoration within Cockroach Bay Aquatic Preserve by the end of 1993.

Hillsborough County	Agriculture	Pol. C-37.4. The county shall seek to establish a scientifically defensible protective buffer zone between the Cockroach Bay Aquatic Preserve and adjacent upland habitat land uses to prevent degradation of water quality and aquatic vegetative habitats as part of the Cockroach Bay overlay district study called for in policy C37-13.
		Pol. C.37.6. By the end of 1992, the county, in conjunction with the EPC, SWFWMD, DNR, TECO and other property owners will develop a program to identify drainage system alterations that facilitate water quality and habitat value improvements in the preserve. The area of concern shall receive priority as the county implements its stormwater management basin studies. The county will utilize a variety of mechanisms, such as the use of natural plant communities for the treatment of stormwater, detention of stormwater, and purchase of lands by the Environmental Lands Acquisition and Protection Program (ELAPP) for multiple use as wildlife habitat and stormwater management.
		Pol. C-37.8. The county will request the ELAPP program to purchase suitable parcels in the area of concern and incorporate site restoration projects that achieve water quality and/or habitat benefits to the preserve.
		Pol. C-37.10. By the end of 1992, the county will encourage all appropriate agricultural or construction operations within the Cockroach Bay drainage basin to develop and apply an SCS soil conservation plan and implement BMP's. Upon completion of the county's stormwater management master plan for this area, the county will require the use of BMP's.
		Infrastructure
		Stormwater management, Obj. 4. Identify and evaluate the sources of water quality degradation which are released to stormwater runoff.
		Stormwater management, Pol. 4.4. Beginning in FY92 stormwater quality data will be collected from predominately agricultural areas, and assessed to determine significant problem areas.
		Stormwater management, Pol. 5.1. Develop and implement program to improve problem areas; BMP's will be used to minimize poor water quality runoff to ground and surface waterbodies.
		Stormwater management, Pol. 5.4. Include use of wetlands for stormwater treatment, pending pretreatment in wetland preservation and restoration prog. in policy 2.11.
		Conservation
		Pol. 2. 8 (see also Coastal Mg't. Pol. 1.8). Initiate Interlocal Agreement to develop agricultural nutrient monitoring & control program for agricultural land uses adjacent to Tampa Bay; require implementation of BMP's where feasible.
		Pol. 2.9. Request local and state agencies to improve monitoring and compliance enforcement of point and nonpoint discharges.

Hillsborough County	Agriculture	Pol. 2.11. Monitor emerging stormwater treatment and BMP techniques and practices and cooperate with SWFWMD to ensure water quality objectives are met through methodologies.
		Pol. 2.12. Provide public education for homeowners which addresses impacts on surface waters of pesticides and fertilizers.
		Pol. 3.6. Promote use of native plants for stormwater treatment.
		Pol 3.8. Initiate an interlocal agreement with SWFWMD to ensure that minimum freshwater flows are scientifically determined and maintained to support natural optimal diversity and productivity in estuarine wetlands.
		Pol. 4.1. Amend floodplain regulations by 1995 to protect wildlife habitat and natural floodwater assimilation capacity.
		Pol. 4.2. Continue to prohibit unmitigated encroachment into 100-year floodplains.
		Mining activities, Obj. 8. Shall comply with or exceed state reclamation and wetlands, water quantity & quality, and wildlife habitat regulations
		Pol. 8.3. Continue and enforce mining ordinance to prohibit mining within 25-year river floodplains and restrict within 100-year floodplains of rivers and streams.
		Pol. 11.2. Require use of topsoil BMP's to minimize erosional soil loss.
		Obj. 14. Protect significant wildlife habitat and prevent any further net loss of essential wildlife habitats.
		Pol. 14.5. Develop and implement comprehensive program to conserve and protect significant wildlife habitats from development activity.
		Pol. 19.1. Determine construction setbacks and buffer distances for wetlands, floodplains, and waterbodies and integrate into LDRs and zoning codes where necessary.
		Coastal Management
		Pol. 1.9. Request local and state agencies to improve monitoring & compliance enforcement of point and nonpoint source discharges to Tampa Bay and tributaries.
		Obj. c-1. Maintain or improve water quality in rivers which do not meet state water quality standards.
		Pol. 2.4. Request regulatory agencies to develop unified & coordinated wetland mitigation and restoration project.
		Pol. 2.7. Amend LDRs to require preservation of native upland plant communities necessary to buffer coastal wetlands.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Hillsborough County	Forestry	Future Land Use
		Pol. A-8.2. Require new development to protect Conservation & Protection areas as defined in the Conservation & Aquifer Recharge element.
		Pol. A-8.13. Preserve wetlands by discouraging use of mitigation, dredge & fill, and similar development activities by revising LDRs.
		Pol. A-8.14. Require new roadways, interchanges or bridge designs undergo an environmental assessment.
		Obj. B-9. Protect environmentally sensitive areas from degradation or damage from agricultural activities by establishing regulatory activities.
		Obj. C-30. Regulations & Performance Standards. Shall be developed to protect water quantity & quality, environmentally sensitive areas, wildlife habitats, rivers and creeks from degradation by development.
		Pol. C-30.2. Require location and design of public roads and bridges within riverine habitats and vegetation communities.
		Pol. C-37.10. By the end of 1992, the county will encourage all appropriate agricultural or construction operations within the Cockroach Bay drainage basin to develop and apply an SCS soil conservation plan and implement BMP's. Upon completion of the county's stormwater management master plan for this area, the county will require the use of BMP's.
		Infrastructure
		Stormwater management, Obj. 4. Identify and evaluate the sources of water quality degradation which are released to stormwater runoff.
		Stormwater management, Pol. 4.4. Beginning in FY92 stormwater quality data will be collected from predominately agricultural areas, and assessed to determine significant problem areas.
		Conservation
		Pol. 3.6. Promote use of native plants for stormwater treatment.
		Pol. 4.1. Amend floodplain regulations by 1995 to protect wildlife habitat and natural floodwater assimilation capacity.
		Mining activities, Obj. 8. Shall comply with or exceed state reclamation and wetlands, water quantity & quality, and wildlife habitat regulations
		Pol. 8.3. Continue and enforce mining ordinance to prohibit mining within 25-year river floodplains and restrict within 100-year floodplains of rivers and streams.

Hillsborough County	Forestry	Pol. 11.2. Require use of topsoil BMP's to minimize erosional soil loss.
		Coastal Management
		Pol. 1.9. Request local and state agencies to improve monitoring & compliance enforcement of point and nonpoint source discharges to Tampa Bay and tributaries.
		Obj. c-1. Maintain or improve water quality in rivers which do not meet state water quality standards.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Hillsborough County	Marinas and Boating	Future Land Use
		Obj. C-30. Regulations & Performance Standards. Shall be developed to protect water quantity & quality, environmentally sensitive areas, wildlife habitats, rivers and creeks from degradation by development.
		Pol. 27.2. Work with DNR, EPC, and county public health unit to identify sources of pollution responsible for closure of Cockroach Bay Aquatic Preserve to public shellfishing, and develop program to identify means of eliminating such sources.
		Coastal Management
		Pol. 1.9. Request local and state agencies to improve monitoring & compliance enforcement of point and nonpoint source discharges to Tampa Bay and tributaries.
		Pol. 2.6. Prohibit development activities on submerged land containing significant seagrass habitat, and seek to restore seagrass coverage.
		Pol. 2.8. Initiate interlocal agreement with Tampa Port Authority to restrict coastal area dredge & fill to channel maintenance, activities associated with water dependent uses, & environmental restoration with accompanying criteria.
		Obj. 3. Maintain & enhance abundance & diversity of living marine resources in Tampa Bay.
		Pol. 3.3. Request Marine Fisheries Commission to restrict fishing where necessary to prevent depletion of resource.
		Pol. 5.3. Oppose destruction or degradation of intertidal/subtidal vegetative communities to develop new manmade estuarine beaches.
		Obj. 7. Give priority to locating water dependent/related land uses along the shoreline of coastal areas.
		Pol. 7.1. Amend the future land use element and map to create marine related land use category.

Hillsborough County	Marinas and Boating	Pol. 7.4. Water-related land uses shall not be developed by dredge & fill wetlands or natural shoreline.
		Pol. 7.6. Encourage expansion of existing marinas prior to siting new ones within county.
		Pol. 7.7. Implement marina siting guidelines (with environmental considerations)
		Pol. 7.8. Concentrate marine service land uses around existing marinas.
		Pol. 7.9. Fueling facilities shall be designated to contain land and water fuel spills.
		Pol. 27.2. Work with DNR, EPC, and county public health unit to identify sources of pollution responsible for closure of Cockroach Bay Aquatic Preserve to public shellfishing, and develop program to identify means of eliminating such sources.
		Ports
		Obj. 1. Ensure that expansion of existing or new siting of port or related facilities is coordinated with the future land use, coastal management, and conservation elements of the comprehensive plan.
		Pol. 1.1. Promote port activities development and resource protection consistent with Tampa port master plan and coordinated with Hillsborough County's comprehensive plan via ma encouraging port authority to: A) assure coordination of submerged land management & permitting programs. B) maintain active membership with TBRPC/ABM & coordinate with Tampa Bay SWIM plan. C) continue support of estuarine resource restoration management program in the county. D) continue to develop mitigation projects minimizing adverse port development on natural resources. E) continue to implement consolidated berth maintenance dredging & disposal plan. F) develop a comprehensive resource management plan for incorporation into dredge plan. G) develop methods for managing bird nesting and feeding habitats on port authority-diked disposal islands. H) monitor & mitigate adverse impact on water quality from dredging projects. I) continue to augment HCEPC water quality monitoring program in inner harbor areas. J) incorporate stormwater treatment capability in port projects where feasible.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Hillsborough County	Hydromodification	Future Land Use
		Pol. A8.9. Utilize public lands for multiple uses (e.g., parks, surface water management systems, natural habitats.)
		Pol. 27.2. Work with DNR, EPC, and county public health unit to identify sources of pollution responsible for closure of Cockroach Bay Aquatic Preserve to public shellfishing, and develop program to identify means of eliminating such sources.
		Infrastructure
		Stormwater management, Pol. 1.1. By FY96, the comprehensive countywide stormwater management master plan will be completed. All individual subbasin/watershed stormwater management master plans, which collectively will comprise the comprehensive stormwater management master plans, shall be initiated no later than FY94.
		Stormwater management, Pol. 1.3. Individual subbasin/watershed stormwater management master plans will be developed to the levels of detail necessary to address the needs generated by the corresponding individual levels of existing population and expected growth. All stormwater management master plans will include determinations of the environmental consequences of any proposed capital improvements and will be developed under the philosophy of maximizing the use of existing facilities.
		Stormwater management, Pol. 2.6. Only those stormwater management facility improvements projects included in the stormwater management capitol improvement plan will be implemented, unless actual significant flooding conditions dictate the immediate need to implement other stormwater management improvement projects.
		Stormwater management, Pol. 2.8. Total flood volume compensation will continue to be required for new developments which encroach into and displace 100-year flood storage or floodplain areas. Further, by FY91 a program to control encroachment within the 100-year flood conveyance areas will be developed and implemented.
		Stormwater management, Pol. 2.10. By FY92, a program to improve groundwater recharge through the use of private and public stormwater management facilities will be developed and implemented. This program may require, among other things, that predevelopment groundwater recharge volumes and rates be maintained on site after development, if the site is located in an area of known or identified average annual aquifer recharge potential of at least two surface-inches of water; and will include restrictions on the lowering of groundwater levels to meet stormwater management regulations. In the interim, new development will be encouraged to consider retention of stormwater rather than detention in those areas.

Hillsborough County	Hydromodification	Stormwater management, Pol. 2.11. New development will continue to be encouraged, through application of existing local regulations, to maintain, with minimal disturbance to natural characteristics, those streams, lakes, wetlands, and estuaries for which stormwater conveyance and/or attenuation potential is significant. By FY92, a program to improve wetland preservation and restoration through the use of public and private stormwater management facilities shall be developed and implemented. This program will include restrictions on the lowering of groundwater levels near wetlands in connection with the construction of stormwater conveyance systems.
		Stormwater management, Pol. 2.12. New development will continue to be required to provide stormwater management systems which meet or exceed the county's stormwater management regulations
		Stormwater management, Pol. 2.15. The use of detention facilities will be the preferred alternative to improving conveyance to alleviate flooding problems, where physically and environmentally practical and economically feasible. All flood control projects will seek to minimize, to the greatest extent practicable, impacts wetland habitat, water quality and groundwater recharge functions. Where impacts are unavoidable, the projects will include measures to compensate for these lost functions.
		Stormwater management, Obj. 3. Stormwater management systems and facilities shall be operated and maintained in a manner which will support the continued provision of the adopted level of service standards.
		Conservation
		Pol. 3.8. Initiate an interlocal agreement with SWFWMD to ensure that minimum freshwater flows are scientifically determined and maintained to support natural optimal diversity and productivity in estuarine wetlands.
		Pol. 4.1. Amend floodplain regulations by 1995 to protect wildlife habitat and natural floodwater assimilation capacity.
		Obj. 14. Protect significant wildlife habitat and prevent any further net loss of essential wildlife habitats.
		Coastal Management
		Obj. 7. Give priority to locating water dependent/related land uses along shoreline of coastal area.
		Pol. 7.1. Amend the future land use element and map to create marine related land use category.
		Pol. 7.4. Water-related land uses shall not be developed by dredge & fill wetlands or natural shoreline.

Table 3.2 — Manatee County

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Manatee County	Urbanization	Natural Resources
		P2.2.2.4.2(e): To assist in the protection of coastal water quality by reduction in impervious surface along coastal areas, thereby reducing the risk of incomplete treatment of stormwater runoff before discharge into coastal waters.
		P2.3.1.2: Require suitable development setbacks or buffers from the landward extent of post-development jurisdictional wetlands, as established pursuant to Policy 3.2.3.1.1.(b). Also establish, where necessary, limits on the level of permitted alteration of land within such setbacks or buffers. Development of land development regulations pursuant to §163.3202, F.S., containing requirements for the setbacks required by this policy.
		P2.3.1.3: Permit the transfer of residential or nonresidential potential, from wetlands and from associated setbacks and buffers required by Policy 2.3.1.2 above, to upland portions of the same project site. Such transfer from jurisdictional wetlands shall be limited to wetland acreage less than or equal to 20% of total gross project acreage.
		Obj. 2.3.2: Protecting Rivers, Lakes, Streams: Prevent future development from adversely impacting the environmental quality of rivers, lakes and streams.
		P2.3.2.2: Prohibit any new development (except redevelopment) within the floodway of any perennial stream, except for water-dependent uses.
		P2.3.2.4: Minimize alteration or relocation of any perennial lake or stream, or of adjacent jurisdictional wetlands, by limiting the density or intensity credit which may be transferred from any acreage of altered or relocated DER jurisdictional wetlands to 50 of the maximum density or intensity associated with the future land use category on any such wetland.
		P2.3.4.2: Reduce impervious surface within the WO-M and WO-E Overlay Districts through appropriate use of pervious materials for pedestrian pathways and driveway, through site design which utilizes the joint or shared use of parking areas or access roads where appropriate, through the clustering of uses within single instead of multiple structures, and through the clustering of uses to maximize the preservation of vegetated open space areas in their natural state.
		P2.3.4.3: Require that each project within the WO-M and WO-E Overlay Districts specify effective measures for limiting the amount of impervious surface which is directly connected to any drainage facility discharging into any inflowing watercourse.
		P2.3.4.4: Reduce the physical impact of development proximate to any inflowing watercourse on portions of any site within the WO-M and WO-E Overlay Districts.

Manatee County	Urbanization	P2.3.4.8: Maximize, where appropriate, the clustering of uses, as described in Policy 2.3.4.2, by permitting consideration of increased net densities and intensities within the WO-M and WO-E Overlay Districts. Net densities on specific projects, or parts thereof, may be permitted to exceed maximum net densities specified in the descriptions of the future land use categories to implement clustering within the WO-M and WO-E Overlay Districts.
		P2.3.4.11: Require minimum percentages of upland area on projects within the WO-M and WO-E Overlay Districts be maintained, during the course of development, as undisturbed or landscaped areas. These minimum percentages shall exceed those required outside the overlay districts pursuant to Policy 2.3.8.1.
		P2.3.6.1: Limit the extent and impact of land development in the Coastal Area and coastal High Hazard Area Overlay District, shown on the Future Land Use Map and described in Policy 2.2.2.4, in a manner suitable for preserving the high value of coastal resources in Manatee County.
		P2.6.1.1: Require that all development or land use activities utilize soil stabilization procedures and construction best management practices to minimize silt erosion and transport during the project development phase.
		Conservation
		P 3.1.1.6: Condition all land development approvals to implement best management practices for reduction of erosion, fugitive dust and air emissions related to the construction of the development.
		Coastal
		P4.1.2.8: Require that all proposed development adjacent to the boundaries of the Terra Ceia Aquatic Preserve ensure that no significant degradation of water quality, shoreline or estuarine habitat occurs either attributable to the development alone or in combination with other developments.
		P4.1.3.1: Encourage the donation of lands adjacent to the coastal shoreline in excess of that required by the Manatee County Park ordinance.
		Obj. 4.3.2: Limit development density and intensity within the Coastal High Hazard Area and direct it outside of the Coastal High Hazard Area and mitigate the impact of natural hazards in this area.
		P4.3.3.5: Maximize the clustering of uses within the CHHA. Such clustering will be used to limit the acreage within the CHHA which will be affected by the proposed development, and will serve to limit the amount of infrastructure required within the CHHA.
		P4.5.1.5: Ensure that no development or redevelopment activities adversely affect the Terra Ceia Aquatic Preserve.

Manatee County	Urbanization	Recreational
		P10.3.1.3: Encourage the use of pedestrian and bicycle access facilities in the design of developments, both public and private, within the WO-M and WO-E Overlay Districts to reduce the use of motor vehicles for transportation, and to enhance recreational opportunities ... also to ensure that all walkways encroaching within the jurisdictional wetland areas or associated setbacks are designed and constructed so as to minimize the amount of impervious surface created in those areas.
		Public Facilities
		P11.3.4.2: Ensure that new development provides on-site detention and filtration of stormwater runoff to remove oils, floatable, silt, sediment, nutrients, and heavy metals at levels required by applicable federal, state, regional and local regulations. As used in the policy "new development" shall include additions or alteration of existing development in a manner that increases the impact of stormwater discharge from the site either in terms of volume of water or any pollutant.

Jurisdiction	Area of Regulation	Comprehensive plan element and GOPs
Manatee County	Agriculture	Natural Resources
		P2.3.1: Maintain control of flooding and erosion through storage of agricultural and urban runoff in wetland areas.
		P2.3.4: Watershed protection via use of land for nonagricultural uses.
		P2.3.5: Protection of Watershed Overlay Districts in areas where agricultural uses are permitted.
		P2.3.5.1: Prohibits location of new confined feedlot operations for livestock within the WO-M and WO-E Overlay Districts.
		P2.3.5.2: Coordinate and work toward development and adoption of interlocal agreements with the Soil Conservation Service, the SWFWMD, the Florida Dept. of Ag., etc. The agreements should provide for appropriate procedures and coordination to ensure implementation of ag. BMP's with documentation of the management practices no later than four years after adoption of the Comp. plan.
		P2.3.5.3: Develop and adopt within three months of adoption of this plan, a list of implementable BMP's which will minimize adverse impacts of ag. runoff into any inflowing watercourse within the WO-M and WO-E Overlay Districts. Provides a list of BMP alternatives.
		P2.3.5.4: Develop coordination mechanisms and fiscal incentives, by 1990 which actively encourage the implementation of BMP's developed for Policy 2.3.5.3 on all lands used for ag. purposes within the WO-M and WO-E Overlay Districts.
		P2.3.5.5: Work with SWFWMD to adapt an interlocal agreement that makes use of the appropriate permitting processes administered by SWFWMD to ensure that ag operations within the WO-M and WO-E Overlay Districts are implementing BMP's that have been identified pursuant to 2.3.5.3.
		Conservation
		P3.3.5.2: By 2000, require all ag. activities outside the WO-M and WO-E Overlay Districts to have and employ Soil Conservation Service Conservation Plans which will minimize adverse impacts of ag. runoff on surface waters and groundwater.
		Coastal
		P4.1.2.10: Require that all ag. activities that are contiguous to, or that have runoff discharging directly into the Terra Ceia Aquatic Preserve and the Sarasota Bay Outstanding Florida Water implement a program of Best Management Practices by 1995.

Jurisdiction	Area of Regulation	Comprehensive plan element and GOPs
Manatee County	Forestry	Natural Resources
		P2.3.4.6: Where the ag. use to be conducted [in the watershed] within a required buffer area is silviculture, such silviculture must be conducted pursuant to a forest management plan approved by the Florida Department of Ag. and Consumer Service's Forestry Division. Limited clearing of natural vegetation or addition of a minimal amount of impervious surface within the required buffer may also be permitted to occur as part of required stormwater outfalls or treatment where approved by appropriate local and regional agencies.
		Conservation
		P3.3.5.3: Encourage attachment of Forest Management Plans, when appropriate, to agriculture Conservation Plans.

Jurisdiction	Area of Regulation	Comprehensive plan element and GOPs
Manatee County	Marinas and Boating	Coastal
		P4.1.1.2: Prohibit the alteration of coastal wetland habitat except in instances of proposed water-dependent uses, or in cases of overriding public interest, such as natural resource restoration activities, the location of public access facilities for public recreation facilities, or deep water port facilities.
		P4.1.1.11: Prohibit the location of new boat ramps in areas characterized by significant seagrass flats.
		P4.1.2.1: Permit utilization of isolated wetlands within the Coastal Area as part of an approved stormwater management plan to limit off-site discharge into coastal waters.
		P4.1.2.6: Limit construction of artificial waterways to necessary drainage improvements required to implement the goals of the public facilities element.
		P4.2.1.1: Establish a priority list in reviewing applications for shoreline uses so as to provide increased priority for water-dependent uses. Marina-type uses are under one and recreational uses are under number three.
		P4.2.1.4: Require that any application for the siting of marina-type uses meet the listed criteria, or are consistent with the listed guidelines (list follows on the same page).
		P4.2.1.5: Limit densities for singe and multi-family boat docking facilities to no more than one power boat slip for every 100 feet of shoreline owned unless designated and used for "sail boat only;" and require facilities over 25 slips to have basins designated as idle speed zones and access channels designated as slow speed zones.

Manatee County	Marinas and Boating	Port
		P7.2.1: Minimize environmental impact caused by Port operations, tenants, or expansion.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Manatee County	Hydromodification	Natural Resources
		P2.3.2.4: Minimize the alteration or relocation of any perennial lake or stream, or of adjacent jurisdictional wetlands, by limiting the density or intensity credit which may be transferred from any acreage of altered or relocated DER jurisdictional wetlands to 50% of the maximum density or intensity associated with the future land use category on any such wetland. Any such reduction in density or intensity credit shall be in addition to any reduction caused by wetland acreage being in excess of 20% of gross project acreage.
		P2.6.1.4: Minimize the alteration of hydric soils supporting jurisdictional wetlands, particularly when such wetland areas are large, or are connected to other surface water systems or wetlands.
		Coastal
		P4.1.1.3: Require that any development-related encroachments into wetlands by mitigated. All such proposed wetland mitigation shall be consistent with requirements which are set out in this section.
		P4.1.1.8: Require buffer zones of fifty feet from post-development jurisdictional wetlands on development sites within the Coastal Area which are contiguous with any Special Water, as defined herein. Limited alteration, or the placement of impervious surface within the required fifty foot buffer may be considered under special circumstances identified in Policies 3.3.1.1 and 3.3.6.4
		P4.1.2.6: Limit construction of artificial waterways to necessary drainage improvements required to implement the goals of the Public Facilities element.
		P4.2.1.2: Prohibit the dredging and filling of submerged lands, except for uses classified, and prioritized in Policy 4.2.1.1, as water-dependent. Dredging and filling for other uses may be considered upon a finding of overriding public interest by the Board of County Commissioners, after considering comment from appropriate state agencies. All dredge and fill activities within or adjacent to the Terra Ceia Aquatic Preserve shall be submitted to the DNR for comments, which shall be considered by Manatee County during project review.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Manatee County	Enforcement/ Intergovernmental Coordination	Natural Resources
		P2.3.5.5: See ag. uses
		Chapter 13 of the Comprehensive plan is composed entirely of intergovernmental coordination objectives.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Manatee County	Stormwater Management	Natural Resources
		P2.3.4.3: Require that each project within the WO-M and WO-E Overlay Districts specify effective measures for limiting the amount of impervious surface which is directly connected to any drainage facility discharging into any inflowing watercourse.
		Conservation
		P3.2.1.1: Apply the listed stormwater treatment standards for development in the WO-M and WO-E Overlay Districts creating additional impervious surface (list follows on same page).
		P3.3.1.2: Discourage the removal of native vegetation within thirty feet of any surface waters or wetland not listed in Policy 3.3.1.1 to aid in filtration of stormwater runoff, except as provided for in policy 2.3.4.6.
		P3.3.3.1: (Under the objective relating to the provision of potable water, the implementation mechanism includes the following directive) The water conservation program may include requirements for stormwater reuse on projects, requirements for use of xeriscaping, establishment of water rate structures conducive to water conservation, and other water conservation strategies.
		P3.3.4.2: Require that all applications for mineral resource extraction contain a reclamation program which requires the reestablishment of the form and function of an appropriate land cover. Also, to require the implementation of all reclamation programs.
		Coastal
		P4.3.3.7: Prohibit the construction of new seawall and discourage the repair or reconstruction of seawall unless no other alternative shore stabilization techniques are available which afford reasonable property protection.

Manatee County	Stormwater Management	Public Facilities
		Obj. 11.3: The goal of this section is to reduce flooding and improve surface water quality in Manatee County.
		P11.3.1: Sets level of service standards and concurrency requirements.
		P11.3.1.1: Require the rate of stormwater discharge from new development to be equal to, or less than, the rate of discharge that existed prior to development based on a 25-year frequency-24 hour duration storm event.
		P11.3.1.2: Design trunk storm sewers and major drainage channels to accommodate the stormwater runoff resulting from a design storm of 25 year frequency 24 hour duration.
		P11.3.1.4: Require within potable water supply water sheds designated by the WO-M and WO-E Overlays on the Future Land Use Map, that all projects meet FDER stormwater design standards for discharge into Outstanding Florida Waters. Waiver, by the Board of County Commissioners, of this policy may be considered for a project subject to the use of a stormwater management system which provides for equivalent levels of stormwater treatment. A list of acceptable treatment practices is provided on the same page.
		P11.3.1.5: Require that stormwater management planning and the construction of necessary capital improvements coincide with, and provide adequate drainageways and water quality treatment to adequately address, the growth and development of Manatee County.
		P11.3.1.7: All projects not within the WO-M or WO-E Overlay Districts shall be designed and constructed to detain, and permit the filtration of, the runoff from the first one (1) inch of rainfall, unless required to detain additional volume pursuant to other local or state regulations.
		P11.3.1.8: Minimize public and private investment within the twenty-five (25) year floodplain by keeping impervious surface and structures within that floodplain to a minimum.
		P11.3.1.9: Require that all fill within the 100 year floodplain shall be compensated by creation of storage of an equal or greater volume, with such compensatory storage also located within the 100 year floodplain. Areas within the 100 year floodplain adjacent to a tidally-influenced water body shall not be subject to this level of service performance standard.
		P11.3.1.10: All projects shall meet all applicable local, state and federal stormwater regulations and shall comply with all coastal management plans prepared pursuant to general or special law. The most stringent standard shall apply in the event of a discrepancy between such regulations.

Manatee County	Stormwater Management	P11.3.2.3: Improve wildlife habitat and supplement natural systems by including, where appropriate, and where feasible, the development of artificial wetland systems within the design of public stormwater siltation/detention basins.
		Obj. 11.3.3: Remedy existing deficiencies. By 1995, acquire the land needed for the major drainage basins identified in Manatee County's Master Stormwater Drainage Plan.
		P11.3.5: Create a stormwater management fee or other countywide stormwater management funding mechanism, which establishes a monthly charge to all property owners based on the amount of impervious surface, for the purposes of (in part) resolving water quantity and quality problems from stormwater runoff, monitoring stormwater quality, and maintaining public stormwater management systems to ensure the treatment and retention of stormwater consistent with standards contained under Objective 11.3.1.
		P11.4.1.3: Protect natural drainage features such as streams, lakes, wetlands, and estuaries, and preserve the function of these natural features for conveyance, storage, and treatment of stormwater runoff.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Manatee County	Miscellaneous	Natural Resources
		P2.11.3.1: Require industrial development does not adversely impact coastal resources, except where such impact is unavoidable in the instance of an overriding public interest as determined by the Board of County Commissioners.
		Coastal
		P4.1.3.4: Require all public access to be consistent with appropriate environmental regulations and policies by developing a management plan for each public access facility maintained by Manatee County which will contain provisions for protection of environmentally sensitive areas.
		P4.2.2.6: Prevent the transfer of costs of private development to the Manatee County taxpayer by minimizing the potential for public involvement in disaster relief. This shall be accomplished by prohibiting the development or improvement of public roads, bridges, and water and wastewater facilities within the Coastal High Hazard Area unless such public investment is specifically provided for in preceding policies under this objective, or is funded, designed, and constructed in a manner consistent with performance standards required pursuant to policy 4.3.3.8.
		P4.3.3.8: Require that all project approvals within the CHHA meet certain performance standards, to be described in detail in land development regulations and which may include procedures for evaluating the impact of the proposed development on hurricane shelter capacity and evacuation clearance times.

Table 3.3 — Palmetto

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
City of Palmetto	Urbanization	Coastal
		P1.1.4: Utilization of Planned Development. Where there are unique environmental concerns, encourage clustering of development.
		P1.10.1: Coastal Area Infrastructure. Infrastructure improvements implemented only if there is overriding public interest.
		Drainage
		Obj. 1.1: Master Stormwater Management Plan. To adopt a stormwater management plan by 1993.
		P1.1.3: Level of Service. Adoption of the plan based upon a standard utilizing a 25 year frequency, 24-hour duration design storm event on-site to ensure that post development runoff rates, volume and palatinate loads do not exceed pre-development conditions.
		P1.1.6: Inspection of Drainage Ditches
		P1.1.7: Improvements to achieve level of service.
		P1.1.8: Development which causes irreversible adverse impacts are not permitted except in cases of overriding public interest.
		P1.1.9: Pollution Control Structures are required during and after construction activity to prevent water pollution from erosion and siltation.
		Obj. 1.2: To implement drainage improvements on a five-year capital improvements schedule.
		Land Use
		P1.1.4: Amenities. New development is permitted only where adequate drainage and stormwater management, open space, and traffic flow and parking are provided.
		Obj. 1.2: Addresses Redevelopment
		P1.2.2: Community redevelopment act will be used to encourage development, including assemblage of parcels of land for buildings and parking.
		P1.2.3: Encourage in-fill development through allowance of higher intensity of land use and through redevelopment activities which locate commercial and non-commercial services in the Community Redevelopment Area.
		P1.8: Discourage the proliferation of urban sprawl by active redevelopment of the City's core and in-fill development of undeveloped enclaves within the city's service area.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
City of Palmetto	Marinas and Boating	Coastal
		P1.3.1: Land use criteria for water-dependent uses. Water enhanced uses such as recreational and commercial uses are #3 on the list of priority.
		P1.3.4: Designation of New Water Dependent/Water Related Areas. Designates the areas east of U.S. 301 and South of Haben Boulevard in the area designated as Planned Development. A plan establishing marina sighting criteria and minimum design specifications shall be established for this area prior to 1993.
		P1.9.4: Recreational Access to Terra Ceia Bay. By 1995, the city is to locate boat ramp(s) adjacent to Terra Ceia Bay providing needed public access.
		Recreation
		P1.1.1: Maintain an adequate standard of water oriented recreational facilities on Terra Ceia Bay.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
City of Palmetto	Enforcement Intergovernmental Coordination	Coastal
		P1.7.2: Terra Ceia Aquatic Preserve. The city shall implement an aquatic preserve management plan for Terra Ceia Bay Aquatic Preserve to improve water quality.
		P1.7.3: Pollution discharges into Terra Ceia Bay will be in compliance with at least minimum Class II water quality standards of FDER.
		Drainage
		P1.1.5: The city public works department shall coordinate its stormwater management activities with other governmental agencies to ensure optimal protection of human life and ecology.
		P1.2.3: The city shall require private developers to remedy situations of minor and temporary flooding associated with new development.
		P1.3: The city should coordinate with FDER, SWFWMD, and Manatee County Public Works for identification and resolution of long range drainage problems.
		Intergovernmental Coordination
		P1.1.4: Proposed amendments to the comprehensive plan shall be forwarded to adjacent local governments and reviewed for consistency with the comprehensive plans of those adjacent local governments.
		P1.2.3: The city shall pursue consistent management of Terra Ceia Bay and the Manatee River.
		P1.2.4: All planning activities shall be coordinated with other local government entities.
		P1.2.5: Regional mediation shall be used in cases of conflict with other local governments.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
City of Palmetto	Stormwater Runoff	Conservation
		P1.2.1: Drainage systems in all new development or redevelopment shall be designed to collect and treat stormwater so as to minimize pollution loadings to receiving water bodies consistent with the level of services standard adopted in the drainage element of this plan.
		P1.2.2: Retrofitting of existing drainage facilities. By 1993, the city shall assess the economic feasibility/cost of retrofitting existing stormwater management facilities to provide for the treatment and removal of pollutants prior to discharge into receiving water bodies.
		P1.2.6: By 1991, the city shall review its development regulations to encourage the use of innovating development practices that minimize the negative water quality impacts. These innovations include "turf block" for overflow, temporary or periodically used parking lot areas, grassed swales for drainage; etc.
		P1.2.10: Natural landscape barriers to flooding and stormwater shall be preserved or enhanced as a requirement to obtaining a development order.
		Traffic
		P1.7.1: The city shall require the paving of parking lots in its land development regulations in order to reduce fugitive dust. However, in order to minimize the addition of unnecessary impervious surface area, the city may permit the use of other techniques (e.g. turf block, porous pavement, sod) in ancillary parking areas.

Table 3.4 — Palm Beach County

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Palm Beach County	Urban	Drainage
		Goal: It is the goal of Palm Beach County to ensure provision of a technically and economically feasible drainage system and to maintain levels of protection from flooding and stormwater inundation for existing and future land uses in a manner compatible with goals for land use management and the protection of critical environmental resources.
		Obj 1: Within the time frame...LOS adopted for drainage facilities shall be adequate to: -- provide protection from flooding and inundation consistent with the severity of the potential threats to health, safety, welfare and property, --maintain stormwater runoff rates at levels compatible with safe conveyance capacities of receiving waters; and -- mitigate degradation of water quality in surface and groundwaters.
		P 1-a: The following LOS for protection from flooding and inundation shall be used as a basis for establishing minimum design requirements for drainage systems:...
		P 1-b: The LOS provided by on-site drainage systems for discharge control shall not exceed the discharge limit established by the agency having jurisdiction over the receiving water at the point of outfall. If not otherwise specified, post-development peak discharge shall not exceed the pre-development peak rate based on the 25-year, three-day storm event.
		P 1-c: The LOS provided by on-site secondary drainage facilities for treatment of stormwater runoff shall be, as a minimum, the volume and duration of required retention or detention as specified by SFWMD criteria.
		P 1-d: No permit authorizing construction shall be issued...without adequate assurance of concurrent construction ... of drainage designed to provide protection in accordance with adopted LOS standards
		P 1-e: By October, 1992, the county shall develop regulations establishing requirements for provision of additional on-site treatment, by the developer, when public policy determines the need for additional protection of sensitive receiving waters, or where existing discharges are determined to be causing or contributing to contravention of applicable water quality standards in the receiving water.
		Obj 2: Palm Beach County's land development policies and regulations shall be reviewed and revised to require that new development does not adversely impact the existing drainage or flood protection capabilities of off-site lands.

Palm Beach County	Urban	P 2-a: Land development policies and regulations shall be amended to require that development orders subject to the LDCs provide for the conveyance of all off-site discharge to legal positive outfall via drainage facilities which are constructed in appropriate easements, with adequate capacity to accommodate the allowable discharge, without overflow to adjacent lands.
		P 2-b: Land development policies and regulations shall be amended to require the development orders subject to the LDCs provide for continued conveyance of existing inflows from off-site lands, in a manner that will not increase inundation elevations on adjacent lands, or downstream rates of discharge resulting from storms, to and including the 25-year, three-day event.
		Obj 4: Palm Beach County shall establish a monitoring program to evaluate whether levels of service for flooding and inundation are being met; further, PBC shall consider incorporating recommendations from the monitoring program and other studies into its land development regulations
		P 4-a: The County,... shall initiate a centralized program to compile and maintain a comprehensive inventory of drainage problem areas, based on citizen inquires, drainage maintenance records and current file reports. The County shall request that Special Districts compile and maintain a similar inventory for periodic input to the central inventory.
		P 4-b: Drainage problem areas within the County's jurisdiction shall be investigated as to severity, frequency, cause and available remedies. Results shall be used to prepare an assessment of drainage needs, including strategies for mitigation. The County shall identify problem drainage areas and notify the entity with jurisdiction of such areas.
		P 4-c: When specific studies are undertaken and findings recommend more stringent requirements than those included in the Comprehensive Plan, the stricter requirements shall be considered for adoption into the LDC for that area.
		Obj 5: Adopt a Drainage Plan for the unincorporated area of the County. The Drainage Plan and the Future Land Use Plan will be coordinated so that development is consistent with drainage facility capacity and adopted LOS standards. This will be accomplished through a cooperative effort between the County, the local drainage districts and the SFWMD.
		P 5-a: The County will utilize the facility reports prepared by the local drainage districts and the SFWMD...to develop the Drainage Plan for the unincorporated area (excluding lands designated as Agricultural Production).
		Sanitary Sewer
		Goal 1: It is the goal of Palm Beach County to provide sanitary sewer in the Palm Beach County Water Utilities Department service area and to allow for the provision of septic or sanitary service in unincorporated areas not served by the PBCWUD.

Palm Beach County	Urban	P 1-a: New development within the PBCWUD service area shall be approved only when capacity is available to provide...for the needed sanitary sewer...
		P 2-a: The minimum levels of service for the Urban Service Area shall be those contained in the following table: (p. 12-SS).
		P 2-b: In the urban service area, the minimum level of service for single lots of record which represent infill development is a septic tank permitted in accordance with State and local regulations as administered by the PBCHU; however, connection to public sewer is required when available. The criteria for availability is based on the estimated sewage flow and is defined in ECR-I.
		P 2-c: The minimum LOS for Development Orders identified in policies 2-g and 2-h in the Capital Improvement Element, within the rural service area, is a septic tank permitted and operated in conformance with State and County Regulations, as permitted by the PBCPHU. Development Orders will not be issued if there is a demonstrated public health hazard.
		P 3-b: Palm Beach County shall identify unincorporated areas in need of (sewer) service and identify funding mechanisms for providing that service, through the following procedure:...
		Obj 5: Palm Beach County shall continue to enforce Environmental Control Rule I (ECR I) and amend its as necessary to protect water and groundwater.
		P 5-b: The County shall continue to permit the use of septic tanks in rural areas, where such areas are approved by the PBCPHU, pursuant to state regulations and ECR I.
		P 5-c: The County and the PBCPHU shall continue to enforce the provisions of Section 4, subsection 12 of ECR I, which requires the abandonment of on-site systems and connection to a central system within 90 days of the availability of said central system.
		Aquifer Recharge
		P 1-a: The County shall adopt, as part of the land development codes, regulations requiring developers to provide open space, water retention and swale areas, to mitigate the impacts of impervious surfaces and reduce potential contaminants entering the aquifer system.
		Conservation
		Obj 6: Palm Beach County shall preserve and protect both the quality and quantity of the County's water resources so that future development activities are conducted in a manner that, at a minimum, meets state water quality standards.
		P 6-a: The County...shall coordinate with the public and private sectors and with the 32 major utilities, 37 municipalities, 13 control and special districts which manage water resources, and the SFWMD to develop a master plan for the protection of surfacewater and groundwater resources...

Palm Beach County	Urban	P 6-b: The County shall develop and adopt an ordinance(s) to protect and improve surface water quality, through reductions in point and non-point source pollutant loadings, in conjunction with requirements of the US EPA NPDES permit application regulation.
		P 6-c: The County shall expand its existing surfacewater quality monitoring network to identify point-source and non-point source water quality problem areas and shall develop and implement a program designed to reduce non-point source discharges to surface waters, where such discharges are not subject to SFWMD permit...
		Obj 9: The County shall coordinate, through administration of the LDCs, enforcement of environmental regulations, and implementation of the Recreation and Open Space element, with the SFWMD, the lead agency, as well as the FDNR and municipalities in the river area, to preserve and protect the Loxahatchee Slough/River Corridor, including the Federally designated Wild and Scenic portion of the Northwest Fork of the Loxahatchee River.
		P 9-a: The County shall participate in the Loxahatchee Slough and River Restoration Technical Advisory Committee and the Loxahatchee Slough and River Restoration Steering Committee, established by the SFWMD, for the formulation of policies for the conservation of the Slough and River.
		Coastal Management
		P 3-e: The County shall require the protection of existing native vegetation buffers adjacent to Lake Worth and the Loxahatchee River through the revision of the Landscape Code...Existing native vegetation shall be maintained for a minimum distance of 50 feet back form the commonly recognized waterway.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Palm Beach County	Agriculture	Drainage
		P 5-c Until adoption of the Drainage Plan, the site performance standards for drainage presented in Policy 1-a and in Chapter 40E-4, 40E-40 and/or 40E-41 F.A.C. shall be applied to all proposed development, excepting development within areas of designated Agricultural Production
		Conservation
		P 6-d: The County shall coordinate with the SFWMD, PB County Soil and Water Conservation District, 13 water control and special districts which deal in water resources, the Farm Bureau, Florida Sugar Cane Growers....to develop agricultural practices that will reduce degradation of water quality. An ordinance addressing water quality and stormwater runoff shall be developed for all new lands placed into agricultural use...

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Palm Beach County	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Palm Beach County	Marinas and Boating	Coastal Management
		P 3-f: The County shall ensure that marinas are sited to minimize impacts on coastal and marine resources by adopting a comprehensive Marina-Siting Ordinance with input from federal, state and regional agencies and municipalities having coastal areas and encouraging consistency of municipal plans with this policy. Existing criteria used in reviewing proposed marina development include: ...compliance with State water quality standards (Chapter 17-3, FAC); consistency with DNR aquatic preserve management plans, including their public interest criteria (Chapter 17-2, FAC)...
		P 3-m: The County shall give preference to water dependent uses and shall prohibit shoreline alteration and construction that degrades the natural functions and values of wetlands (as outlined in section 17-312.015 FAC and section 403.918 FS)

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Palm Beach County	Hydromodification	Land Use:
		P 9-a: adopt ordinance to regulate mining and excavation activities ...determining the suitability of an area for excavation shall include...littoral zones impacts

Table 3.5 — Town of Jupiter

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Town of Jupiter	Urban	Future Land Use
		Obj 1.1: Direct future growth into areas by urban services that have adequate capacity, as defined by the adopted level of service standards, which shall be incorporated into the Town's land development regulations by May 1990.
		P 1.1.1: All development shall be approved only if level of service standards as set forth in Policy 1.2.1 of the CIE are met concurrent with the impact of the proposed development. These standards shall be integrated into the land development regulations.
		P 1.1.14: The impact of land use on water quality and quantity shall be considered in land use planning and regulation. This shall be assured by inclusion of provisions in the Land Development Regulations for consideration of the impacts of proposed development on water quality and water quantity.
		Obj 1.2: By May 1990 the land development regulations shall contain provisions and standards which ensure that future growth patterns take into consideration topography, soil and other natural and historic resources...
		P 1.3.3: Adopt land development regulations that shall contain specific and detailed provisions required to implement the adopted Comprehensive Plan, and which at a minimum address:...(d) drainage and stormwater management, (e) periodic flooding...
		Infrastructure
		Obj 1.1: The correction of existing public facility deficiencies as determined by the adopted level of service standards within this Plan according to the time tables established by the following policies.
		P 1.1.1: Priority should be given to work programs for corrections of the deficiencies in and necessary improvements to facilities in the following order: (a) water supply source; (b) water treatment plant and distribution system; (c) drainage system.
		P 1.1.3: The Town through its Department of Public Services and Water Department will provide the Town Council annual reports describing the status of the construction, maintenance and replacement of water and drainage facilities in Jupiter. These reports shall be submitted to the Town Council prior to budget hearings.
		P 1.1.9: The Town shall continue to work with surrounding local governments and appropriate water control districts to assure adequate drainage for the residents of Jupiter.
		P 1.3.4: New developments requiring sewer service shall not commence until there is adequate wastewater treatment capacity in accordance with the adopted level of service standard.

Town of Jupiter	Urban	P 1.3.5: The Town shall continue to enforce its ordinance requiring new and existing development to connect to ENCON sewer service when such service becomes available.
		P 1.3.6: Individual package treatment plants are prohibited. Septic tanks shall be prohibited except in those instances where service is not presently available (within 100' of an existing sewer trunk line), and is an existing neighborhood undergoing residential infill; however, at the time sewer service becomes available, hookup will be mandatory.
		P 1.3.8: The Town shall undertake a comprehensive drainage study and master plan by the year 1992. This plan should include, at a minimum, the following: An analysis of: (a) identification of drainage facilities, (b) identification of geographic service area, (c) facility design capacity including an analysis of the adequacy of the drainage system based upon historic storm events, including an inventory of areas experiencing flooding problems...(h) stormwater impacts to quality of receiving waters; Planning provisions for:... (k) requirements for drainage basin retrofitting as a stipulation or redevelopment approval, (l) drainage facility design standards for minimizing impacts of stormwater runoff to receiving waters.
		P 1.3.11: The Town shall maintain and where necessary update land development regulations which provide for adequate drainage facilities in conformance with the allowable stormwater discharge criteria established by the SFWMD. New development stormwater management systems exempt from the SFWMD permitting shall be designed so that post-development runoff volumes do not exceed predevelopment runoff volumes for a storm event of three-day duration and 25-year return frequency. This or a more stringent standard shall become part of the land development regulations to be completed by May 1990.
		P 1.3.12: The Town shall, through the Department of Public Services, coordinate all drainage design, construction and maintenance activities that occur within the Town limits or affect the Town in any way. This will require active and regular communication with and monitoring of Palm Beach County, Village of Tequesta, the Loxahatchee River Environmental Control District, the Northern Palm Beach Water Control District, the South Indian River Water Control District, the SFWMD, the FDOT, and private developers.
		P 1.4.2: The Town shall establish a permitting procedure to ensure that adequate facility capacity exists or will be provided concurrent with development in order to maintain adopted level of service standards.
		P 1.4.4: The following LOS standards are hereby adopted ... Drainage facilities (1) Water Quantity: Retention of the first half inch of the runoff from a 25-year, 3-day duration storm event as per SFWMD permit manual IV; (2) Water Quality: Wet detention of the greater of either: (1) one inch of runoff from the developed project; or (2) the total runoff from 2.5 times the impervious area of the project.

Town of Jupiter	Urban	P 1.5.1: The Jupiter Town Council, the Water Department and the Public Service Department shall work together along with state and regional agencies, and develop a water conservation program which will include the following components:... (f) requiring water saving devices...Existing homes not containing such devices are encouraged to retrofit such systems.
		Obj 1.6: Protect, and where possible enhance the functions of natural recharge areas and drainage features to ensure an adequate supply of recharge waters to the surficial aquifer.
		P 1.6.1: The Town shall continue to actively enforce new development stormwater drainage requirements for the retention of half inch of the runoff from a 25-year, 3-day storm event consistent with the requirements of the SFWMD permit manual IV.
		P 1.6.2: The Town shall continue to actively enforce its existing open space requirements for new development. This open space area will preferably preserve existing native vegetation and will consist primarily of pervious surfaces.
		P 1.6.3: The Town shall continue its efforts to increase retention /detention capacity of drainage basins in order to reduce stormwater outfall runoff to the Loxahatchee River and its tributaries increase groundwater aquifer recharge potential.
		P 1.6.4: If areas are to be developed the Town shall, where feasible, require retrofitting of the existing stormwater outfall system to provide for greater retention/detention capability.
		Conservation
		Goal 1: To conserve, protect and enhance the functions and values of the natural resources within Jupiter to ensure the highest environmental quality possible.
		Obj 1.1: To implement a program and a set of standards to protect Environmentally Sensitive Areas from adverse impacts of urban development.
		P 1.1.2: At a minimum, environmentally sensitive areas shall contain one or more of the following natural resources: ... (c) wetlands and deepwater habitats; ...(g) within floodways and area subject to flooding...
		Obj 1.4: The quality of the Town's surface water shall be maintained at current levels as determined by the DER using DER established criteria for water quality classifications as reported in Chapter 17-3 FAC.
		P 1.4.3: By 1990, the Town shall adopt and implement a comprehensive stormwater management ordinance.
		P 1.4.4: The Town will maintain active membership on the Loxahatchee Council of Governments, the Loxahatchee River Management Committee, and the TCRPC.

Town of Jupiter	Urban	P 1.4.6: Runoff from streets and yards should be carefully controlled to prevent flooding in adjacent areas or pollution of water bodies. Catchment basins should be constructed at storm sewer outfalls to prevent silt and other pollutants from entering water areas. French drains, properly engineered, will be considered an acceptable stormwater runoff drainage practice. The Town will continue its program of upgrading the drainage systems of each basin, and will give priority to those areas with the most severe problem.
		P 1.4.8: Parking facilities should be located away from the bodies of water and their runoff controlled.
		Obj 1.6: To protect the surface and ground water supply, prevent erosion and prevent loss of life and property through the restriction of building in the flood zone areas of Jupiter, the Town shall continue to enforce its adopted Flood Zone Ordinance and shall adopt further ordinances for flood protection as part of the Drainage Master Plan by the end of 1991.
		P 1.6.2: No development will be approved in flood hazard areas and floodways, that is, on land immediately adjacent to major drainage and receiving streams, rivers, or low areas which are known to be subject to flooding or rushing water and which therefore, create a hazard to life and property. Rather, the Town will encourage that these lands be reserved for conservation, open space and recreation.
		P 1.6.3: The Town shall prevent and regulate the construction of flood barriers which will unnaturally divert flood hazards to other lands.
		P 1.6.4: Filling, grading and mineral extractions within the 100-year flood prone area is prohibited unless it can be proven that there will be not increase in flood hazards to other lands, and it is being accomplished in the public interest.
		Coastal Management
		Obj 1.4: To ensure that the quality of estuarine water within the Town is maintained at current levels as determined by measurable chemical constituents...
		P 1.4.1: By fiscal year 1990, the Town shall adopt and implement a surface and stormwater management ordinance. This ordinance is intended to minimize degradation of surface waters through treatment of stormwater runoff. At a minimum, specified treatments should include maximum feasible on-site retention, establishment of littoral zones in lake management systems and wetland areas and use of grassy swales for filtration. This policy shall apply to both existing and new systems.
		P 1.4.2: Retrofitting of substandard public drainage systems shall occur during repair, expansion, or redevelopment activities. This policy is intended to address water quality problems resulting from inadequately maintained systems, or those systems constructed previous to a complete understanding of the effects of stormwater runoff on water quality.

Town of Jupiter	Urban	P 1.4.3: The Town shall seek the cooperation and participation of all surrounding local governments in minimizing and eventually eliminating pollutant sources and excess silt entering estuarine waters. Consistent with this effort the Town will maintain active membership on the Loxahatchee COGs, Loxahatchee River Management Committee and the TCRPC.
		P 1.5.14: (same as Conservation P 1.6.2)
		P 1.5.15: (same as Conservation P 1.6.3)
		Intergovernmental Coordination Element
		P 1.1.32: Because the following bays and estuaries fall under the jurisdiction of more than one local government, the Town shall cooperate with all governmental entities involved in the management of the Jupiter Inlet, ICWW and the Loxahatchee River...
		P 1.1.35: The Town will maintain active membership in the Loxahatchee COGs, Loxahatchee River Management Committee, and the TCRPC.
		Capital Improvements Element
		P 1.2.1: The Town shall use the following LOS standards in reviewing the impacts of new development and redevelopment...: Drainage -- Retention of the first half inch of the runoff of a 25-year, 3-day storm event as per SFWMD Permit Manual IV.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Town of Jupiter	Agriculture	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Town of Jupiter	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Town of Jupiter	Marinas & Boating	Conservation
		P 1.4.7: Commercial shoreline development should be restricted to those activities that require a waterfront location.
		P 1.4.21: Docks and piers should not obstruct navigation or public use of waters, and they should be constructed in a manner that does not restrict water flow...
		Coastal Management
		P 1.5.10: (same as Conservation P 1.4.21)
		P 1.5.11: The Town shall coordinate review of estuarine shoreline development with appropriate federal, state, regional and local agencies to prevent irreparable or irretrievable loss of natural coastal resources...
		P 1.6.1: The priority ranking of land use activities within the estuarine shoreline zone shall be: (a) public use marinas; (b) other water oriented recreation; (c) commercial fishing; (d) water related uses; (e) water dependent industries or utilities; and (f) residential with marinas or other water oriented recreation uses. The Town Zoning Code shall be amended to include an overlay estuarine shoreline zone to encourage the preferred uses.
		P 1.6.2: The Town should conduct a marina siting study to develop criteria to be used by the Division of Planning and Zoning Administration in the development and site plan review procedure for all marina projects.
		P 1.8.3: Locate boat ramps in areas designated as No Wake Zones, adjacent or in close proximity to existing or planned water dependent or water related land uses...

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Town of Jupiter	Hydromodification	Infrastructure
		P 1.1.8: The Town should continue regular maintenance of drainage structures, facilities and equipment to ensure efficient operation and management of stormwater. Swales, ditches and the banks of surface water bodies should be maintained to prevent soil erosion and to allow the natural filtration of stormwater runoff through the planting of suitable shoreline and emergent vegetation.
		Conservation
		P 1.4.1: Until a stormwater management ordinance is adopted the Town shall implement the following policy: Prior to construction of a surface water management system a plan for the design and maintenance of the lake system shall be prepared and approved of by the Town Council. Such a plan shall include a vegetated and functional littoral zone for any lake system greater than or equal to 0.5 acres in size...
		P 1.4.2: New development should preserve permanent open space buffer zones of natural vegetation along waterways and within the floodplain.
		P 1.4.10: Bulkheads and seawalls should be discouraged. They should be allowed only in situations where they are replacing an already existing structure that is in need of repair. Alternative shoreline stabilization techniques are preferred and encouraged in all instances.
		P 1.4.11: Bulkheads should be located at, or landward of, coastal wetlands and their ecotones.
		P 1.4.12: Sloping revetments and interlocking block, instead of vertical seawalls, should be used in high energy areas to more effectively dissipate wave forces, boat waves and reduce the effects of bottom scouring.
		P 1.4.16: Approved upland waterway construction should be done in the dry, if possible, so that shaping and stabilization of the banks can be completed before the "plug" is removed for connection to open waters.
		P 1.4.17: New artificial waterways should be discouraged.
		P 1.4.18: Dredging for navigational access or flood control should be planned to prevent unnecessary channels. In areas having shallow water shorelines, peripheral canals on the upland, leading to a central navigational channel, should be considered rather than separate access channels for each waterfront landowner.
		P 1.4.19: All dredging spoil material should be placed on suitable upland areas rather than in coastal waters or wetland areas. This will help minimize degradation of water quality and adverse impact on sensitive estuarine life and upland habitats...
Town of Jupiter	Hydromodification	P 1.4.20: Effective turbidity control mechanisms should be used to protect water quality in areas adjacent to construction activities.

		P 1.5.7: All slopes, cuts and fills should be stabilized immediately with vegetation or other effective means in order to prevent unnecessary erosion. Natural vegetation should be retained whenever possible.
		Coastal Management
		P 1.4.4: The Town shall not permit significant alteration of tidal flushing and circulation patterns by development activities without demonstrated proof by the applicant that such alteration will not have a negative impact on the natural environment.
		P 1.4.5: The Town shall prohibit canals...a canal is an artificial waterway providing access to waters of the State or to any of the rivers, streams, creeks...
		P 1.4.6: Effective turbidity control mechanisms and procedures shall be used to protect water quality in areas adjacent to construction activities (same as Conservation 1.4.20).
		P 1.5.3: (Combination of Conservation P 1.4.11 and P 1.4.12)
		P 1.5.4: Land development activities that are feasible only through dredging and filling of submerged and wetland areas should be discouraged.
		P 1.5.5: Buffer zones of vegetation should be established between any area of urban development and adjacent waterways. This vegetation should consist of native vegetation adapted to natural conditions.
		P 1.5.6: A buffer zone of native...vegetation...shall be provided and maintained around wetland and deepwater habitats...(same as Conservation P 1.5.16).
		P 1.5.7: (same as Conservation P 1.4.16)
		P 1.5.8: (same as Conservation P 1.4.18)
		P 1.5.9: (same as Conservation P 1.4.19)

Table 3.6 — Jupiter Inlet Colony

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Inlet Colony	Urban	Future Land Use
		Obj 2: To manage future growth and development through the preparation, adoption, implementation and enforcement of land development regulations which: coordinate future land uses with the appropriate topography, soil conditions and the availability of facilities and services; encourage the prevention, elimination or reduction of uses inconsistent with the Future Land Use Goal, Future Land Use Plan, and Future Land Use Map, and encourage redevelopment, renewal or renovation, where and when necessary.
		P 2.1: Adopt and enforce land development regulations that shall contain specific and detailed provisions required to implement the adopted Comprehensive Plan, and which, at a minimum: ... Regulates areas subject to seasonal and periodic flooding by requiring adequate drainage and stormwater management, and requires that all such development be subject to site plan review.
		P 2.2: Land development regulations shall contain criteria and standards which: address buffering and open space requirements, and landscaping requirements.
		P 3.1: The owner of any lot shall be responsible for the on-site management of stormwater runoff and drainage in a manner so that post-development runoff rates, volumes and pollutant loads do not exceed those prescribed by the SFWMD.
		Obj 4: To require that all development orders and permits for future development and redevelopment activities are issued only if public facilities necessary to meet level of service standards are presently available, concurrent with the impacts of the development.
		P 4.1: Require that public utility and service authorizations, as necessary, have been procured prior to issuing any development order or permit from the appropriate governmental agency or entity that provided the particular service.
		P 4.2: Require that development orders and permits shall not be issued which result in a reduction of the level of services for the affected public facilities below that LOS adopted in this Comprehensive Plan...LOS standards shall be supplied to the appropriate facility/service provider so that they can provide these assurances.
		P 4.3: Properties on septic tanks shall be governed by appropriate provisions of Florida law, and Palm Beach County ECR 1, which regulates the use and installation of individual systems.
		P 5.1: Requests for development orders or permits shall be coordinated, as appropriate, with adjacent municipalities, Metropolitan Planning Organization, Palm Beach County, TCRPC, Special Districts, SFWMD, and State and Federal agencies.

Jupiter Inlet Colony	Urban	Infrastructure
		P 1.1: Public facility LOS standards as displayed in Table 1 are hereby adopted, and shall be used as the basis for estimating the availability of capacity and demand generated by a proposed development project. Sanitary Sewer: One septic tank per lot based on minimum lot criteria established in PBC ECR 1. According to the JIC support documentation...should central wastewater service become necessary or be required, the Loxahatchee River Environmental Control District would provide service to the Town under either of the following conditions: (1) "that 50% or more of the record owners of property to be served as such localized sewerage system shall desire and consent to the construction ..." or (2) "that a health hazard or emergency situation exists which would justify the construction ... said localized system." The LOS would be established at time of construction.
		P 1.5: The Town continue to require that not more than 50% of any lot be developed or redeveloped including all impervious areas such as pools, ... in order to maximize surface water retainage and minimize stormwater runoff from each lot. This policy is intended to address both water quantity and quality issues in an effort to protect the natural environment in and adjacent to the Town.
		P 2.1: Existing deficiencies will be addressed by undertaking the following activities: Sanitary Sewer: The Town shall establish procedures and/or requirements for the inspection of septic tanks and drain fields as part of a monitoring and maintenance program. The Town shall periodically review the current status of utilities to determine whether or not the Town should be managed, operated and maintained by the Central Regional System. Drainage: Institute a program of annual inspection of drainage system as a means of monitoring the efficiency of the system.. Assess the results of the annual program each 5 years to determine whether or not corrective action is needed. Improvements shall be designed to meet the adopted LOS standards.
		P 3.2: The basic drainage policy shall consist of the following components: 1. Continue routine maintenance of catch basins and conduits. 2. Regulate swale plantings and sodding. 3. Encourage appropriate land use activities in flood prone areas. 4. Protect environmentally sensitive areas by controlling adjacent activities. 5. Require use of vegetation, mulches and berms for control of pollutants from construction sites. 6. Enforce the flood Protection Ordinance to maintain the flooding protection provided by natural features. 7. The existing drainage system has been designed to accommodate build-out; therefore, maximum use of the system shall be required to be maintained. 8. The Town shall comply with the State's Stormwater Control Rule, Chapter 17-25, FAC, should any new additional stormwater discharge facilities become necessary to the Town's existing drainage system or should any major repairs become necessary or redevelopment take place.

Jupiter Inlet Colony	Urban	Obj 6: To provide stormwater drainage regulations that protect natural drainage features and ensures that future development utilizes stormwater management systems in a manner to protect the functions of recharge areas and natural drainage features.
		P 6.1: Limit post-development runoff rates and volumes to predevelopment conditions and preserve existing natural drainage features by utilizing SFWMD design techniques.
		P 6.2: Protect and preserve water quality from the impacts of land development by use of construction site practices oriented to minimizing off-site transport of sediment.
		P 7.3: The Town shall require the use of water saving devices, such as, low volume fixtures...when reviewing all future building permit applications. Existing homes not containing such devices are encouraged to retrofit such systems when replacement is required.
		Coastal Management
		P 2.3: Incorporate urban BMPs identified in the Areawide Waste Treatment Management Plan (208 Plan) to reduce non-point source pollutant loadings to estuarine waters via the Colony's stormwater drainage system.
		Conservation
		Obj 6: To require that land development and land use activities be compatible with environmental characteristics of the Colony.
		P 6.2: The Colony shall coordinate closely with the Palm Beach county environmental Control Officer to assure that State and/or Countywide environmental protection regulations are enforced.
		P 6.3: Subdivision regulations shall be enforced so that development is planned in accordance with natural characteristics of the land such as slope, elevation, drainage patterns and natural vegetation.
		Intergovernmental Coordination
		P 4.3: Continue to participate in the management of the Jupiter Inlet and estuarine system, under the guidance of county, State and Federal regulatory agencies, in conservation and management programs through Town participation on the Beaches and Shores council, Jupiter Inlet District and other related bodies.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Inlet Colony	Agriculture	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Inlet Colony	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Inlet Colony	Marinas & Recreational Boating	Future Land Use
		P 1.8: The submerged lands within the ICWW shall be in conservation use.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Inlet Colony	Hydromodification	Conservation
		P 3.1: Work cooperatively with property owners, when necessary, in the development of erosion control plans where areas experience erosion of shoreline or banks.
		P 4.3: Protect mangroves in the Colony to provide habitat for fish, birds and other wildlife, as well as, to help stabilize the shorelines from wave erosion by strict enforcement of the County's Mangrove Protection Ordinance.

Table 3.7 — Tequesta

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Tequesta	Urban	Future Land Use
		Obj 1.1.0: Coordinate all future land use decisions with the appropriate topography and soil conditions, the availability of facilities and services and land use designations as per the Future Land Use Map.
		P 1.1.1: Enact development regulations in 1990 which guide future land use configurations so as to preserve topography and soils; require facilities and services; and, protect against seasonal or periodic flooding.
		P 1.5.6: Provide for drainage and stormwater management, open space, and safe and convenient parking and on-site traffic flow by applying the site plan review requirements of the current land development regulations within the Village.
		P 1.6.1: The Village will coordinate its future planning and development with the SFWMD by requiring the issuance of a Surface Water Management Permit or Water Use Permit, as appropriate, prior to issuing a development order.
		P 1.8.2: High intensity developments in Tequesta's hurricane flood zone should be serviced by central sanitary sewer systems.
		Utilities: Sanitary Sewer
		P 1.1.1: The installation and use of septic tanks in new development areas shall be governed by Environmental Control Rule I, Chapter 31, FAC and Chapter 17, FAC. Further, the Village shall require that all new development connect to and utilize the central system.
		P 1.1.3: The Village should consult with ENCON, lead planning agency for the Northern Region planning effort, and the Palm Beach County Water Quality Management Plan in determining the most effective and efficient wastewater systems for use in Tequesta, and eliminate the use of septics in all new developments.
		P 1.1.4: The Village should continue to request that ENCON submit comments on proposed projects/developments regarding wastewater system requirements prior to, or as part of, the site plan review process.
		P 1.1.6: The Village should request that ENCON submit evidence of acceptance of the wastewater system to serve proposed projects/developments and evidence that contractual obligations placed on the developer regarding the wastewater system are being met prior to issuance of certificate of occupancy.

Tequesta	Urban	P 1.1.7: The current utilization of septic tanks within the Village is deemed to be an acceptable alternative. However, in the event that water quality sampling programs administered by the Palm Beach County Health Department and/or Palm Beach County Department of Environmental Resources Management (i.e., in the North and Northwest forks of the Loxahatchee River) indicate that State Water Quality Standards are being violated, the Village, within one calendar year, shall initiate a study to determine whether or not violations are caused by the use of septic tanks. If conclusive evidence is collected, the Village shall establish a program to eliminate septic tank use within Tequesta.
		P 1.3.1: The Village should incorporate into local plans, codes and ordinances various land use and wastewater systems design and construction criteria that will minimize point and non-point discharges into surface waters.
		Utilities: Drainage
		Obj 1.1.0: The Village shall maintain a five-year schedule of public facilities Capital Improvement needs, to be updated annually, in conformance with the Capital Improvements element to ensure that proper management of the quantity and quality of stormwater runoff is provided to minimize both potential flooding and runoff pollution based on compliance with the adopted drainage LOS standard. Capital Improvement needs are defined as: (1) those public drainage improvements necessary to correct existing deficiencies in order to maximize the use of existing facilities while maintaining the adopted LOS standard; or (2) those public drainage improvements necessary to meet projected future needs based upon the adopted LOS without encouraging urban sprawl.
		P 1.1.1: Improve the existing drainage facility at the following locations by FY 1990: (1) The intersection of Tequesta Drive and Willow Road; (2) The intersection of Tequesta Drive and Cypress Dr; and (3) Along Cypress Dr in 1990 and 1991.
		P 1.1.2: Improve the existing drainage facilities along Seabrook Road beginning in FY 1991 with completion in FY 1992.
		P 1.1.3: Investigate by FY 1991 the most cost-effective approach for developing a Village-wide Stormwater Management Plan by whether: (1) Petitioning the Northern Palm Beach County Water Control District or; (2) Contracting an engineering firm to prepare a proposal for developing a Comprehensive Stormwater Management Plan, which could be prepared in phases, for the Village including necessary capital improvements with their associated costs.
		P 1.1.6: The Village shall by 1995 commit funds to the next five-year (i.e. 1995-1999) Capital Improvement schedule for the preparation of a comprehensive Stormwater Management Plan for the Village.

Tequesta	Urban	P 1.1.7: By 1997, the Village shall have completed a Village-wide Stormwater Management Plan to include, at a minimum, the following: (a) Delineation of drainage basins; (b) Inventory and location of all drainage lines, retention and/or detention areas, culverts, canals, and outfalls, including a capacity analysis of each system; (c) Determination of adequacy of the drainage system based upon historic storm events including an inventory of problem areas...(e) An analysis of stormwater impacts to the quality of receiving waters and the methods used to protect the natural drainage features within each basin; and ...
		Obj 1.2.0: Village stormwater drainage regulations, incorporated within the Subdivision Regulations Ordinance, shall provide for protection, and where possible, enhancement of natural drainage features and ensure that future development utilizes stormwater management systems to protect the functions of recharge areas and natural drainage features.
		P 1.2.1: The Village shall actively support and enforce new development stormwater drainage requirements for the retention of one half of the runoff from a 25-year, 3-day storm event consistent with the requirements of the SFWMD's Management and Storage of Surface Waters, Permit Information Manual Volume IV, dated September 1986 and as updated January 1987.
		P 1.2.2: The Village shall continue to actively enforce its existing open space requirements for new development with emphasis on preserving native vegetation and the reduction of impervious areas.
		P 1.2.3: The Village shall continue its efforts to increase on-site retention/detention capacity of drainage basins in order to minimize to the extent possible stormwater runoff to the Loxahatchee River and Intracoastal Waterway.
		P 1.2.4: The Village shall require new developments to limit post-development runoff rates and volumes to pre-development conditions.
		P 1.2.5: The Village shall protect and preserve water quality by use of construction site BMPs and the incorporation of techniques such as on-site retention and/or detention, use of pervious surfaces, native vegetation, and Xeriscape landscaping practices when considering all proposals for development and/or redevelopment.
		Obj 1.3.0: The Village shall ensure through the land development approval process that, at the time a building permit is issued, adequate public drainage capacity is available or will be available at the time of occupancy.
		P 1.3.1: Public drainage facilities LOS of a three year frequency, twenty-four hour duration storm event is hereby adopted...
		P 1.3.3: All development and/or redevelopment activities associated with on-site drainage facilities shall be designed and reviewed to maximize non-structural techniques...in combination with structural drainage facilities...to reduce stormwater runoff, maintain local recharge and protect water quality.

Tequesta	Urban	P 1.3.4: The Village shall continue its routine maintenance program by inspection, at least annually, the catch basins, culverts, outfalls, and retention areas as a preventative measure against any major system failure.
		Conservation
		Obj 1.2.0: Within one year of the submittal of the Comprehensive Development Plan, the Village shall adopt the recommendations of the Palm Beach County Areawide Plans related to Urban BMPs and amend the Code of Ordinances to require future development to restrict off-site runoff of stormwater pollutants in accordance with drainage criteria established by Palm Beach County and the SFWMD.
		P 1.2.1: The Village shall adopt the on-site stormwater retention/detention criteria established by the SFWMD and Palm Beach county as part of its land development regulations.
		Obj 1.3.0: Within one year of submittal of the CDP, the Village shall amend its landscape regulations to provide for the preservation of the native vegetation on undeveloped portions of the Village.
		P 2.5.1: The Village shall amend its land development regulations to limit the amount of impervious area permitted in the development of flood prone areas by establishing minimum green space requirements pursuant to a master drainage plan for the coastal area.
		P 2.5.2: The Village shall amend its Code...to prohibit septic tank and private sanitary sewer systems in the coastal high hazard areas.
		Intergovernmental Coordination
		P 1.3.3: The Village shall cooperate with agencies and municipalities serving to protect the resources of the IRLAP by actively coordinating with the development of estuarine policies that shall be, at a minimum, consistent with present agencies including, but not limited to, the Loxahatchee Council of Governments, Jupiter Inlet District, Martin County and the Palm Beach County Beaches and Shores Council.
		Coastal Zone Management
		Goal 1.0.0: Protect, conserve and enhance coastal resources...
		Obj 1.1.0; Protect and enhance coastal and estuarine environmental quality...By adopting specific ordinances or revising existing code provisions relating to water quality, shoreline stabilization, wetland preservation...within one year of submittal of the CDP.
		P 1.1.1: The Village shall cooperate with agencies and municipalities serving to protect the resources... (see conservation P 1.3.3).

Tequesta	Urban	P 1.2.1: The Village shall amend its Code of Ord. to restrict urban stormwater run-off from entering the Lox River and IRL estuaries and amend its landscape regulations to promote vegetative filtering of stormwater pollutants.
		P 1.2.2: The Village shall cooperate with the PBC Health Department and DERM to continue to monitor their water quality sampling stations located within the Village and incorporate substantiated water quality controls (e.g. drainage) into the development review process to ensure that future development in the coastal area does not contribute to the degradation of estuarine water quality.
		P 1.3.4: The Village shall promote the protection of the Lox River through adoption of the Lox River Wild and Scenic River Man. program and adoption of its recommendations.
		Obj 2.1.0: Within one year...the Village shall review and analyze its internal drainage system to evaluate its effectiveness in reducing urban stormwater pollutants from entering the estuaries and groundwater within its jurisdiction.
		P 2.1.1: Continue to review development plans in order to require on-site detention of a substantial portion of stormwater runoff in the coastal zone, in coordination with the SFWMD.
		P 2.1.3: The Village shall incorporate the appropriate recommendations of the Areawide 208 Plan designated to reduce non-point source pollutant loading to the Lox River and IRLAP into its development review procedures and review its current drainage system in terms of design criteria established by the SFWMD.
		P 2.2.1: Continue to review all development applications in the context of the pervious cover and landscaping provisions of the development code...
		Obj 4.1.0: Within one year...amend its Code...to prohibit the disturbance of the sensitive sea grass beds and productive mangrove and high marsh areas adjacent and within the IRLAP, except when necessary for the continued health...
		P 4.1.1: The Village shall amend its landscape regulations to require a 20 foot landscape buffer zone along the IRLAP in order to insure that this environmentally sensitive estuary is left undisturbed.
		Capital Improvements
		P 1.3.1: The Village shall require local street, drainage...improvements, as required by the application of the Tequesta LOS standards, of any new development necessitated by such development.
		P 1.5.1: Prior to issuing a development order or building permit, Village shall use LOS standards adopted in the various elements of this CDP to review the impacts of the development upon public facility provision. The Village shall not issue a development order or building permit which results in a reduction in service...

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Tequesta	Agriculture	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Tequesta	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Tequesta	Marinas and Boating	Conservation
		P 2.2.1: The Village shall prohibit development or modification of the shoreline within the IRLAP except to provide for the water-dependent and water-related land uses such as marinas, provided that the siting of such shall be consistent with the proposed PBC Marina Siting Ordinance and Policy 1.1.7 of the Coastal Management Element or where the modification is necessary for the continued health...
		Obj 2.3.0; Within one year...the Village shall amend its Code... to provide for the protection of the IRLAP by prohibiting development in the area that will degrade or otherwise adversely effect the water quality or wetlands of this unique estuarine environment.
		P 2.13.4: No development, including residential development, shall be permitted within mangrove or other wetland areas unless project alternatives that would avoid mangrove and wetland impacts are unavailable and mitigation is provided...For the purpose of this policy, sufficient mitigation is as required by FAC rules 17-312.300 through 17-312.390. It is intended that all standards in these citations are to apply to all new development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, are not applicable.
		P 2.13.5: The Village shall permit within mangrove, seagrass and wetland areas: elevated piers, docks, and walkways of no more than five feet in width, unless vehicular access in the form of a golf cart or similar vehicle is necessary, in conjunction with a permit from the FDER, pursuant to Chapter 17-27.
		P 2.13.6: Within mangrove, seagrass and wetland areas, all piers, docks and walkways shall be constructed on pilings.
		P 2.13.7: No pier, dock or walkway shall be located on submerged land which is vegetated with seagrasses except as is necessary to reach waters at a depth of one foot below the lowest point in a boat including the motor for docking facilities. The docking terminus shall not be located over a seagrass bed.

Tequesta	Marinas and Boating	Coastal Zone Management
		P 1.3.1: The Village shall establish LOS standards for siting water-dependent and shoreline land uses, including...marinas, boat ramps and public access areas by incorporating into its Code of Ord access and land dedications for future development and redevelopment in the coastal area. These LOS standards shall be established within the five year planning period.
		P 1.3.3: The Village shall ensure that marinas are sited to minimize impacts on coastal and estuarine resources by coordinating the development of a marina siting ordinance with PBC and the Regional Planning Council.
		P 3.1.3: The Village shall amend its Code... to restrict public and private development affecting coastal mangrove areas, except where such development is necessary to protect the health, safety and welfare of the public.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Tequesta	Hydromodification	Conservation
		P 2.13.8: Bulkheads and seawalls shall be permitted only to stabilize disturbed shorelines or to replace deteriorated existing bulkheads and seawalls. Rip-rap shall be placed at the toe of all replaced bulkheads and seawalls.

Table 3.8 — Martin County

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Martin Co.	Urban	Intergovernmental Coordination
		P A.2.d: As part of its ongoing program of environmental resource protection, the County shall support the development and adoption of interjurisdictional natural resource management plans for the Atlantic Ocean, St. Lucie River, Indian River Lagoon, Loxahatchee River, Lake Okeechobee, the Savannas and any significant corridors of native habitat of endangered, threatened and special concern species.
		P A.3.a: The County shall continue to coordinate with the SFWMD, and with the Marine Resource Council in promoting awareness of new information concerning the St. Lucie River Estuary system and the impacts of development on the functions and values of the estuary system, and in promoting the provisions of the Indian River Lagoon Management Plan.
		P A.3.c: Martin County staff shall attend the SFWMD Board meetings as appropriate in order to facilitate lines of communication regarding drainage and water management issues.
		P A.3.e: As an ongoing effort the County shall actively participate in the SFWMD Land Purchase programs and identify parcels that it wants to purchase and which coincide with the District's needs.
		P A.3.i: As an ongoing effort the County shall jointly evaluate and monitor with the DER and DNR major causative factors underlying shoreline erosion and desirable preventive measures for abatement, preservation and restoration of shorelines.
		P A.3.l: As an ongoing effort, the County shall coordinate with the DER in managing development and conservation decisions in a way which protects the values and functions of wetlands, spoil islands and submerged lands plus other shoreline protection measures, as appropriate.
		P A.5.f: As an on-going program, the County in conjunction with the SFWMD, shall monitor the performance of existing off-site drainage facilities, evaluate existing and potential future problems or issues, and pursue the funding of necessary structural and non-structural system improvements for effective surface water management. However, new development must make all improvements required by their development to maintain established level of service and shall not be allowed to make improvements that cause or add to off-site flooding.
		Future Land Use
		Obj A.1: Within one year of the scheduled date for submission of this Growth Management Plan, Martin County shall submit to the Florida DCA Land Development Regulations that implement all provisions of the adopted Growth Management Plan.

Martin Co.	Urban	P A.1.a: The County's existing LDRs shall be revised to conform to all guidelines and standards contained in this Plan and will: (3) Protect environmentally sensitive lands, and incorporate minimum landscape standards. (4) Regulate areas subject to seasonal and periodic flooding and provide for drainage and storm water management. (9) Provide that development orders and permits shall not be issued which result in a reduction of the level of services for the affected public facilities below the base level of service standards adopted in this Growth Management Plan, Capital Improvement Element. (10) Include provisions for the transfer of development rights to: (a) protect environmentally sensitive areas and/or historic resources and; (b) specify those receiving zones within Urban Service Areas (USA) where additional density can be accepted and where infill development allows for new development and redevelopment of previously under utilized portions of the USA.
		Obj A.2: By July 1990, LDRs shall establish specific operating procedures for a development impact monitoring and evaluation system.
		P A.2.a: Martin County shall implement an impact evaluation system that measures the impacts of proposed development upon the adopted LOS for sanitary sewer, potable water, drainage and aquifer recharge, solid waste, recreation, transportation facilities and other pertinent public facilities and services.
		Obj A.3: Martin County shall establish a "concurrency management system" which will establish the procedures and/or process that the county government will utilize to assure that no development orders or permits will be issued which result in a reduction of the adopted LOS standards of this Growth Management Plan at the time that the impact of development occurs.
		P A.3.a: The concurrency requirement may be satisfied and approval of a development permit may be granted if potable water, wastewater, solid waste and drainage service is available to meet adopted LOS standards specified in the Capital Improvement Element as follows: P A.3.a.(3): The necessary facilities are under construction at the time a permit is issued;
		Obj A.7: The performance standards presented in Section 4-5 of this chapter, addressing such items as drainage and stormwater management, open space, and safe and convenient on-site traffic flow, shall be incorporated into revised LDRs, and implemented during approval and monitoring of development orders.

Martin Co.	Urban	P G.1.d: Martin County shall discourage the proliferation of small, individual water treatment, waste water disposal, and solid waste disposal facilities. Package treatment plants shall be prohibited outside the Primary and Secondary Urban Service Districts and outside of the Expressway Oriented Transient Commercial Service Center Land Use District.
		Coastal Management
		Obj A.3: Estuarine Environmental Quality. To ensure that the quality of estuarine water within the County is maintained at current levels of dissolved oxygen, nutrients, turbidity, chemical pollutants, and trace metals as defined by the FDER administrative rules, as amended, at the time of adoption of the Comprehensive Growth Management Plan.
		P A.3.a: Drainage System Retrofit. Retrofitting of substandard public drainage systems shall occur during repair, expansion, or redevelopment activities. This policy is intended to address water quality problems resulting from inadequately maintained systems, or those systems constructed previous to a complete understanding of the negative effects of stormwater runoff water quality on the marine environment.
		P A.3.b: Surface and Stormwater Management Regulations. The County should continue to actively enforce established surface and stormwater management regulations so as to eliminate inadequately maintained or designed systems which are degrading water quality.
		P A.3.d: Intergovernmental Cooperation for Water Quality. The County shall participate with surrounding local governments to improve water quality in the drainage basins within the County; and provide assistance to improve water quality in other mutually shared drainage basins within adjacent counties such as the C-24 Canal.
		P A.3.e: Drainage Basin Plans. The County will complete drainage basin plans for areas of the County by 1995 as needed.
		Conservation and Open Space
		Obj A.4.: Surface Water. To ensure that the quality of surface water within the County is maintained, and where unacceptable, improved. Measure: The County shall study and determine minimum surface water quality standards, testing procedures and compliance monitoring which apply to all surface water bodies. The study and an ordinance adopting these standards and provisions shall be completed in 1992.

Martin Co.	Urban	P A.4.a: Surface and Stormwater Treatments. The County will continue to implement and update, from time to time, adopted surface and stormwater management regulations that assure that systems are designed to meet or exceed current standards, and can be practically and easily maintained. Enforcement of these requirements are intended to increase retention of stormwater, minimize degradation of surface waters and protect wetlands through treatment of stormwater runoff. At a minimum, surface and stormwater treatments may include, but are not limited to: (1) Appropriate on-site retention or detention in accordance with adopted local and state regulations including filtration, exfiltration, establishment of littoral zones in lake management systems and wetland areas and use of grassy swales for filtration. (2) Protection of wetlands and environmentally sensitive areas; and (3) Management and protection of the quantity, timing and quality of water releases and discharges.
		P A.4.b: Retrofit of Substandard Public Drainage Systems...
		P A.4.c: Monitor and Minimize Impacts to the St. Lucie Estuary...cooperate with SFWMD...
		P A.4.d: Improve Water Quality in all Waters of the State, Including Creeks, Rivers, Canals, and Sloughs Connected to Waters of the State...participate with surrounding local governments...
		P A.4.e: Improve Water Quality of Taylor Creek/Nubbin slough...No diversion shall be allowed which increases pollutant loads or freshwater discharges to the St. Lucie Estuary or the Indian River.
		P A.4.f: Drainage Projects. Martin County will complete all drainage projects and studies identified as a County responsibility in the Drainage and Natural Ground Water Aquifer Recharge and Capital Improvements Elements. All drainage projects must meet the criteria outlined in Objective 3 of the Drainage and Natural Ground Water Aquifer Recharge and Capital Improvements Elements.
		P A.4.g: Drainage Basin Plans Must Meet Adopted Water Quality Standards. All drainage basin plans shall be designed to protect the water quality of surface water bodies by assuring that the rate, timing and quality of runoff meet adopted local and state water quality standards.
		P A.5.h: Design of Drainage Outfall. All drainage outfall and irrigation connections, including those associated with agricultural uses, shall be designed to maintain, and where possible, improve water quality.

Martin Co.	Urban	P A.4.i: Floodplain/Natural Harbor Protection. Floodplains and natural harbors in a Martin County are recognized in the land development regulations as unique resources requiring protection and conservation...To that end, floodplains and natural harbor banks and shores shall be provided specific standards as to slope protection and erosion control/mitigation.
		Sanitary Sewer Services
		Goal A: The provision of needed wastewater facilities in a timely, cost-efficient manner, which provides for public health, safety and welfare, maximizes the use of existing facilities and promotes compact urban development.
		Obj A.1: To develop an active program that provides for correction of existing public and private wastewater deficiencies within a ten-year planning period.
		P A.1.a: The County shall undertake a regular wastewater collection system inspection and condition assessment of its facilities in order to document and evaluate the condition of each component, including manholes, pipelines and service laterals. Upon completion of the inspection program, rehabilitation alternatives will be included in the next available revision to the capital improvement program and considered in the following annual budget.
		P A.1.d: During 1992, the County shall establish, by ordinance, minimum criteria for the location, type of treatment, construction, operation and maintenance of all new and existing wastewater package treatment plants. All new and existing wastewater package treatment plants shall meet the minimum criteria for operation, maintenance and annual reporting. This policy will require close coordination and cooperation with the Florida DER. Prior to 1992 policies for the review and approval of plans and specifications for sewage collection and treatment will be based on criteria established by the Great Lakes - Upper Mississippi River Board of State Sanitary Engineers as published in Recommended Standards for Sewage Works.
		P A.1.e: As part of its wastewater treatment facility centralization, the County shall give priority to providing regional collection service to areas of existing residential development with one or more of the following conditions: (1) package plant or septic tank failure; (2) ground or surface water contamination or pollution; (3) package plants not meeting the recommended 500 feet setback from surface water; or (4) septic tanks at residential densities exceeding three units per acre or serving multi-family units on small lots.
		Drainage and Natural Ground Water Aquifer Recharge
		Goal A: It is the goal of the Martin County Drainage and Natural Ground Water Recharge Element to protect and improve the quantity and quality of its ground and surface water resources.

Martin Co.	Urban	Obj A.1: Martin County will maintain existing ground water and surface water quality, improve areas of degraded ground water and surface water quality and prevent future contamination of ground water supply sources.
		P A.1.b: The State Water Quality and Construction Policies, an Element of the State Water Quality Management Plan, shall be used as a general source for evaluation by Martin County. Review of these policies will begin in 1990 and where appropriate will be incorporated in existing County ordinances in 1992.
		P A.1.c: In 1992, the County shall establish by ordinance minimum surface water quality standards. These standards shall apply to all surface water bodies. The ordinance shall include provisions for testing and compliance monitoring. The County will regulate surface water quality based on State standards in the interim.
		P A.1.m: All existing and new development shall be required to connect to regional water and wastewater systems when such systems or capacity are within 150 feet unless State or County ordinance specify a different criteria. These systems are identified in the Potable Water Services and Sanitary Sewer Services Elements.
		P A.1.o: For new subdivisions, Martin County shall allow septic tank systems on single family residential lots if the lot has a minimum area of one-half acre per unit and water is provided by a private well. If water is provided by an interim or major water system, septic tank systems will be allowed on single family residential lots with a minimum area of one-third acre per unit.
		P A.1.q: For all future land developments, an evaluation of the potential impacts of additional private wells and septic tanks on ground water supplies shall be done.
		P A.1.t: Martin County shall continue to prohibit the spreading of that municipal, domestic, or industrial sludge, which may include heavy metals or other toxic materials as determined by Federal and State agencies and County ordinances.
		Obj A.3: The County will maintain and improve existing drainage facilities that area located within the Urban Service District, have capacity deficiencies and a history of flood complaints, while using generally accepted design criteria for current and future projects. The design criteria shall assure that those projects provide for their outfall needs without creating future deficits. Measure: Reduce the number of identified undersized drainage facilities in major conveyance systems within or affecting the Urban Service District by 25 percent in 1995 and by 50 percent in 2000.
		P A.3.a: The Board of County Commissioners shall evaluate the establishment of local water management districts in order to promote equitable solutions to drainage problems. This evaluation shall occur and recommendations shall be made in 1995.

Martin Co.	Urban	P A.3.b: Martin County Public Works Department shall pursue Regional, State or Federal funding of a master plan for watershed management and fiscal administrative procedures for significantly improving watershed management in 1992. This plan shall commence in 1991. The watershed master plan shall analyze existing hydrological and geological data from the previously prepared drainage studies and the analysis done for this element. It shall produce needed supplemental data as is economically feasible; refine data concerning specific drainage basin boundaries. The proposed drainage basin studies shall be incorporated in the Mater Plan, as appropriate. These basins are located within the Urban Service District, have capacity deficiencies and a history of flood complaints. The plan includes canal system improvements, structural needs an design specifications, proposed retention basins, and suggested performance criteria for managing run-off.
		P A.3.c: Based on improved drainage and flood plain data, the County shall formulate and adopt a county wide master drainage ordinance which emphasizes cost effective and environmentally sensitive solutions in 1993. The drainage ordinance shall be revised, as appropriate, based upon the analysis and recommendations of the Mater Plan.
		P A.3.d: Martin County shall enforce the LOS standards presented in this element in Section 13-4.D.2 at the time of the adoption of the LDRs. The Design Criteria used to reach these LOS will be the same as those of the SFWMD for all development, except for single family residential lots less than two acres. This adoption will include revisions to subdivision and other existing ordinances.
		P A.3.e: Martin County will begin the development of a schedule preventative drainage maintenance program in 1992. This program will include a capital and operations budget to support the program.
		P A.3.f: Martin County will prioritize the need for drainage improvement projects using the following types of criteria (13 listed, page 13-32).
		P A.3.g: Martin County will insure that proposed developments are designed and constructed so that drainage system improvements meet county and SFWMD criteria. This would include both on-site and off-site improvements of public and private facilities.
		P A.3.h: All new developments shall provide an equitable contribution for off-site drainage improvements necessitated by the development. No new development shall be allowed that causes a reduction in the LOS standard established for the existing off-site facilities.
		P A.3.I: The County shall have the option of establishing a stormwater utility ordinance to fund drainage basin improvements. If established, fees would be based upon geographic service areas and the cost of improving drainage facilities within the service areas.

Martin Co.	Urban	Obj A.4: Maintain desirable surface water levels, discharge rates, and discharge volumes to reduce adverse environmental impacts, while providing for adequate levels of flood protection. Measure: In 1991 and in subsequent years thereafter, all new surface water management systems shall conform to the SFWMD and County design standards which shall limit environmental impacts and provide adequate levels of flood protection.
		P A.4.a: The County shall assist in maintaining the highest practical surface water levels and appropriate water level fluctuations to provide for reasonable water use and for balanced urban, agricultural and natural systems by rejecting the design of drainage systems that result in over drainage.
		P A.4.b: The County shall limit an increase in volume and degradation of water quality. The County will work with the SFWMD to develop appropriate criteria in 1992.
		P A.4.d: The County will implement the surface and stormwater management requirements of the Excavation and Fill Ordinance #21 and other future surface water management regulations.
		P A.5.e: The County shall promote on-site retention/detention of surface waters and natural return of surface water into the soil, and channeling of excess stormwater volume primarily via grassy swales and natural drainageways. Martin County shall establish LDRs that integrate storage areas and natural drainage courses into water management plans for new development.
		P A.5.g: The landscape ordinance and excavation and fill ordinance shall be reviewed in 1991 to assure that current best management practices are incorporated to minimize erosion and siltation, especially during construction.
		Obj A.7: To ensure that surface and ground water resources occurring in or affecting more than one governmental jurisdiction are effectively managed to preserve, protect and enhance those resources through continued active county coordination with adjacent governments and appropriate agencies.
		P A.7.a: In order to provide for better management of the County's water resources, water system planning and development programs shall be coordinated with the SFWMD and be consistent with water availability, use, allocation, and management plans.
		P A.7.b: To promote improved water quality management, the County shall coordinate with federal, state, and regional planning and water management districts in improving water management through the evaluation and incorporation of appropriate emerging technologies.
		P A.7.c: Assure coordination of watershed management plans and policies, with appropriate local, regional, state and federal agencies, including local municipalities, the SFWMD, the TCRPC, State DER, State Agricultural Extension Service, USSCS, USGS, USACOE, and other appropriate agencies. Martin County shall designate a staff member to be responsible for the coordination of water management issues and plans.

Martin Co.	Urban	P A.7.d: Martin County shall coordinate and cooperate with the SFWMD, SCS and other relevant agencies in developing an upgraded information program for assessing flood damage prevention issues.
		P A.7.g: The County shall coordinate its watershed management planning and implementation activities with appropriate local, regional, state and federal agencies to improve management capability, better assess new concepts, plans, technological advances and to work cooperatively to achieve economy of scale in overall land and water management.
		P A.7.h: The County shall coordinate with FDER, the SFWMD, the USSCS, the USGS, other appropriate agencies and private utility companies on matters related to water management programs; identification and analysis of local hydrology and major changes in hydrologic conditions; systems engineering; water conservation; technical assessment of water management practices and impacts generated by planned land development on water systems improvements.
		P A.7.l: The County shall continue to work with other agencies to achieve a reasonable means of minimizing the adverse impacts of stormwater runoff for existing and future land use activities on Lake Okeechobee and Indian River Lagoon.
		Capital Improvements
		P A.2.d: Public facilities financed by non-enterprise funds (i.e., roads, drainage, parks, library, corrections, emergency medical service, fire service, and other County government buildings) shall be financed from current assets: revenue, equity and/or debt. Specific financing of specific capital projects shall consider which asset, or group of assets, will be most cost effective, consistent with prudent asset and liability management, appropriate to the useful life of the project(s) to be financed, and efficient use of the County's debt capacity. All development orders issued by the County which require public facilities that will be financed by debt shall be conditioned on the issuance of the debt, or the substitution of a comparable amount of non-debt revenues.
		P A.3.c.(1): No final development order shall be issued by the County after May 31, 1990, or such earlier date as may be adopted by the Board of County Commissioners, unless there shall be sufficient capacity of Category A and Category C public facilities to meet the standards for LOS according to the following deadlines: (a): For the following public facilities the capacity must meet the standards prior to the issuance of the final development order; or the final development order shall require the public facilities capacity to meet the standards prior to the impact of development, but no later than the issuance of the CO if the capital improvements are to be provided by the applicant: 1) potable water 2) sanitary sewer 3) solid waste 4) stormwater management

Martin Co.	Urban	Traffic Circulation
		Obj. C.2: Plan and develop a transportation system that preserves environmentally sensitive areas, conserves energy and natural resources, and minimizes adverse environmental impacts.
		P C.2.c: Where feasible, bascule span bridges shall either be replaced with fixed span bridges or modified in order to reduce environmental impacts and potential traffic circulation problems.
		P C.2.d: If no feasible alternative exists, needed transportation facilities may traverse environmental protection or conservation areas; however, such access should be limited and design techniques should be used to minimize the negative impact upon the natural systems.
		P C.2.e: New roadways or rail routes shall be designed to: prevent and control soil erosion, minimize clearing and grubbing operations, minimize storm runoff, and avoid unnecessary changes in drainage patterns.
		Port, Aviation and Related Facilities
		P E.1.e: Additional surface water runoff caused by airport expansion will be retained on site.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Martin Co.	Agriculture	Future Land Use
		Goal L: Martin County shall fairly and equitably preserve agricultural lands by enhancing and protecting appropriate and productive lands for agricultural uses.
		P L.1.b: The County shall encourage the use of management practices for soil conservation which best minimize erosion and protect those attributes which make the soil productive.
		Conservation and Open Space
		Obj A.5: Soil Erosion. The County shall reduce the rate of soil erosion and resulting sedimentation from agricultural and land development activities.
		P A.5.a: Best Management Practices to Reduce Soil Erosion. The County shall continue to cooperate with and assist the Martin County Soil and Water Conservation District in their efforts to implement techniques such as BMPs to reduce the rate of soil erosion....
		P A.5.f: Erosion Control for Drainage Outfalls. All drainage outfall and irrigation connections, including those associated with agricultural uses, shall be designed to prevent erosion and sedimentation.
		P A.5.g: Soil Erosion Study. In conjunction with the Martin County Soil and Water Conservation District, the U.S.G.S., SFWMD, and the ACOE, Martin County will perform a comprehensive soil erosion control study by July, 1995, to identify relative erosion potentials for the soil types found in the County, identify a standard for soil erosion reduction that can be technically achieved and require that standard be maintained at all sites where site alteration is being done.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Martin Co.	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Martin Co.	Marinas and Boating	Intergovernmental Coordination
		P A.3.h: As an ongoing effort the County shall involve the Florida Inland Navigation District (FIND) in its water-related recreational plans. This would include boat ramps, fishing access and beaches, etc.
		Future Land Use
		P M.1.f.(4): Marine Waterfront Commercial. The Land Use Map designates marine waterfront commercial areas which shall accommodate marine resort, marina and water related services along the more highly accessible waterfront sites with the potential to satisfy the unique location, market, and resource needs of the water dependent more intense marine service/industrial uses. Specific zoning district regulations shall be drafted and adopted to regulate the nature of marine waterfront commercial operations, and to assist in maintaining the stability of adjacent and nearby residential areas through use restrictions, landscaping and screening, and nuisance abatement standards. The regulations shall also guard against environmentally adverse impacts to biologically active and environmentally sensitive habitats in a manner consistent with the coastal and natural resource protection performance standards in this plan.
		Coastal Management
		P A.4.a: Enforce Shoreline Performance Standards in Review of Estuarine Development Proposals including docks, which are defined as fixed or floating structures providing access to submerged lands. Martin County shall protect the estuarine shoreline protection zone and upland transition zone in order to protect the stability of the estuary, enhance water quality and preserve shoreline mangrove communities.
		Obj A.5: Priority of Water Dependent and Water Related Uses. Upon adoption of the Comprehensive Growth Management Plan, Martin County will develop and implement criteria for prioritizing water dependent and water related land use activities within the most appropriate identified waterfront Land Use Areas.
		P A.5.a: The priority ranking of waterfront land use activities within the estuarine shoreline zone shall be: (1) public boat ramps and public use marinas...
		P A.5.b: Shoreline Zoning. The Martin County Zoning Code shall be amended to include an overlay estuarine shoreline district to encourage the preferred uses where compatible with existing residential development and with environmental constraints.
		P A.5.c: Estuarine Protection Zone. All development within the Estuarine Protection Zone of the Coastal areas of Martin County shall meet the Shoreline Performance Standards found in Policy A.8.a of the Conservation and Open Space Element.

Martin Co.	Marinas and Boating	P A.5.d: Commercial Marina and Large Multi-Slip Docking Facilities Siting Criteria. [Contains siting criteria for commercial marina projects and multi-slip docks with more than 15 boat slips.] P A.5.d(4)(c): Sewage Capacity: must provide adequate sewage handling capacity in accordance with Sate and County statutes...may be in the form of on-site pump-out or connection to a public treatment plant...All commercial marinas with fueling facilities must provide pump-out facilities at each fueling dock or location P A.5.d(4)(d): Spill containment and Hazardous Waste Handling Procedures:
		P A.5.e: Public Access, Boat Ramp Siting Criteria. [Includes sewage capacity, location, etc.]

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Martin Co.	Hydromodification	Intergovernmental Coordination
		P A.3.g: As an ongoing effort the County shall encourage the U.S. Army COE to stabilize bank erosion along the St. Lucie Canal in an environmentally acceptable manner that controls sedimentation into the St. Lucie Estuary.
		Drainage and Natural Ground Water Aquifer Recharge
		P A.4.c: Martin County shall continue to prohibit canals. A canal is defined as an artificial waterway providing access to waters of the State or their tributary systems for the purposes of navigation, aesthetics, recreation, and/or enhancement of property value. This definition excludes appropriately designed swales and ditches approved by the Public Works Director as necessary for controlled discharge of surface water.
		Coastal Management
		P A.4.b: Manage the Location of construction activity Near Estuarine Systems and Enforce Appropriate Vegetation and Landscaping Requirements. [Contains criteria for shoreline hardening, stabilization.]
		P A.4.c: Review of Proposed alterations to Natural Tidal Flushing Patterns and Circulation of Estuarine Waters. Martin county shall not permit significant alteration of tidal flushing and circulation patterns...

Martin Co.	Hydromodification	P A.4.d: Prohibit Canals.
		P A.1.g: Native Habitat Requirement Around Constructed Lakes: All new development shall provide and maintain native littoral zone vegetation and a buffer zone of native upland and transitional vegetation around all deepwater habitats which are constructed on-site to the following criteria: (1) The littoral zone area shall include a total area of at least 10 square feet per linear foot of lake perimeter. The littoral One planting area consists of that area between one foot above control water elevation to four feet below control water elevation. (2) The native upland and transitional buffer area shall also include... (3) The required area of littoral zones and upland buffer zones may be created by utilizing contiguous areas adjacent to the lake or by creating "habitat Islands" within the water body t the extent that no less than 25% of the lake shoreline is provided with littoral zones and adjacent upland buffers...
		Conservation and Open Space
		P A.5.d: St. Lucie Canal Bank Stabilization. The County's Resource Conservationist shall coordinate with the ACOE and MCSWCD on any plan or proposal to stabilize the St. Lucie Canal banks in an environmentally sensitive manner.
		P a.5.h: Slope Protection. By July 1990, floodplains and natural harbors in Martin County shall be recognized in the land development regulations as unique resources requiring protection and conservation. To that end Floodplains and natural harbor banks and shores shall be provided specific treatment as to slope protection and erosion control/mitigation.
		P A.8.b: Manage the Location of Construction Activity Near Estuarine Systems and Enforce Appropriate Vegetation and Landscaping Requirements. No new construction shall be permitted to threaten the stability of the estuary system. The County shall coordinate with the State in managing development and conservation decisions in a way which protects the values and functions of wetlands, spoil islands, and submerged lands. The circumstances under which shoreline protection measures shall be permitted shall be established by the County Engineer and the Director of the Growth Management Department and approved by the Board of County Commissioners. Any Criteria must incorporate the following: (1) Shoreline hardening shall be accomplished by the establishment of appropriate native wetland and/or transitional upland vegetation. (2) Hardening of the shoreline shall be allowed only when erosion is causing a serious threat to life or property...Native vegetation used in combination with rip-rap materials...
		P A.8.d: Prohibit Canals. Martin County shall prohibit canals...

Table 3.9 — Jupiter Island

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Island	Urban	Future Land Use
		P 01.05.03.01: Within one year of adoption of the Comprehensive Plan, consistent LDRs should be adopted for the purpose of plan implementation. At a minimum, such LDRs should regulate the following: (8 listed) (3): The development of land within areas subject to seasonal or periodic flooding; (4): Drainage and stormwater management;
		P 01.05.05.03: All development orders should be specifically conditioned on the availability of facilities and services necessary to serve the proposed development with infrastructure at adopted service level standards.
		Obj 01.06.04.00: The Town's LDRs should be modified to include the coordination of future land uses with appropriate topography and soil conditions.
		P 01.06.04.01: Decisions regarding future land development should consider the natural topography of the development site and the soil types occurring on the site.
		Infrastructure
		Obj 04.01.01.00: To implement procedures in 1990, to ensure that at the time a development permit is issued, adequate infrastructure facility capacity is available or will be available when needed to serve the development.
		P 04.01.01.01: The Town should adopt the following LOS standards which should be used as the basis for determining the availability of facility capacity and the demand generated by a development. Stormwater Drainage: (LOS standard) Design storm frequency for a 3-year, 24-hour storm duration.
		Obj 04.01.03.00: To provide effective stormwater management through the use of natural sheet flow and percolation.
		P 04.01.03.01: The Town should continue to regulate development to assure that adequate on-site containment of stormwater is achieved.
		P 04.01.05.03: The Town should continue to permit disposal of wastewater effluent through the use of septic tanks while protecting the quality of surface and ground water.
		P 04.01.05.04: The Town should consider adoption of a program to require periodic inspection of all septic tanks in the Town.

Jupiter Island	Urban	P 04.01.05.08: The Town should require all new construction and renovation to utilize water conserving plumbing fixtures.
		Obj 04.01.06.00: To protect natural drainage features.
		P 04.01.06.01: The Town's LDRs will be revised to provide standards for protection of natural drainage features.
		Coastal Management
		Goal 05.01.00.00: To plan for, and where appropriate, restrict development which would damage or destroy the natural or historic resources of the coastal area.
		Obj 05.01.01.00: LDRs will be modified to protect, conserve or enhance wetlands in the coastal area.
		P 05.01.03.02: The Town should continue to cooperate with the existing Indian River Lagoon Aquatic Preserves Management Plan and should cooperate with any future resource protection plans, such as resource planning and management plans or estuarine sanctuary plans developed for the Indian River Lagoon.
		Obj 05.01.04.00: To maintain or improve estuarine environmental quality.
		P 05.01.04.01: The revised LDRs should require the water quality of the Indian River Lagoon to be maintained at its current designation as "Good," through cooperation between the Town of Jupiter Island and other local governments having jurisdiction over the lagoon and its shores.
		P 05.01.04.02: The revised LDRs should restrict new point-sources of pollution discharging directly into the Indian River Lagoon, or into canals leading to the lagoon.
		P 05.01.04.04: The revised LDRs should require development to be designed to accommodate stormwater on-site in accordance with existing LDRs.
		P 05.01.04.06: The revised LDRs should limit specific and cumulative impacts of development upon water quality.
		Obj 05.04.01.00: To establish an intergovernmental coordination mechanism with adjacent local governments, consistent with the policies of the Intergovernmental Coordination Element of this Comprehensive Plan, for area-wide conservation of coastal resources.
		P 05.04.01.01: The Town should review comprehensive plans of adjacent municipalities and Martin County to determine whether or not coastal resources are being managed in a consistent manner.
		Conservation
		Obj 06.01.02.00: To protect the environmental quality of the Indian River Lagoon as set forth in the Coastal Management Element Goals, Objectives and Policies.

Jupiter Island	Urban	P 06.01.02.01: The Town should cooperate with all Federal, State and regional regulatory agencies with jurisdiction over wetlands to improve compliance with State and Federal regulations.
		P 06.01.03.08: The Town should require all new construction and renovation to utilize water conserving plumbing fixtures.
		P 06.01.03.09: The Town's LDRs should be modified to include the SFWMD's Surface Water Improvement and Management Plan (SWIM).
		P 06.01.05.01: Soil erosion should be minimized by consideration of topography, hydrology and vegetative cover in review of site development plans.
		P 06.01.05.02: The Town should assist the USDA Soil Conservation Service in any activities or programs directed at minimizing soil erosion.
		P 06.01.06.03: The Town's LDRs should be revised to protect the Indian River Lagoon, the near shore reefs and the mangrove wetlands from degradation associated with development or redevelopment.
		Intergovernmental Coordination
		P 08.01.03.04: The Town should continue to cooperate with the Division of Recreation and Parks, Bureau of Environmental Land Management (BELM) in administration of the Indian River Lagoon Aquatic Preserve Management Plan which applies to the estuarine waters adjacent to Jupiter Island. Construction, excavation or other activities waterward of the mean high water line that can impact on estuarine environmental quality should continue to be coordinated with the DNR.
		P 08.01.03.09: The Town should continue to participate in and cooperate with State and local programs which protect the natural environment.
		Capital Improvements
		P 09.01.02.01: The level of service standard for drainage shall be adequately accommodating stormwater runoff from a twenty-four hour, 3-year frequency storm.
		P 09.01.04.01: The development code shall be amended to specify that no development permit shall be issued unless the public facilities necessitated by the project (in order to meet level of service standards) will be in place concurrently with the impacts of the development.
		IMPLEMENTATION: There are no required capital improvements planned for areas of sanitary sewer system, solid waste disposal, stormwater drainage, potable water supply, or natural groundwater aquifer recharge.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Island	Agriculture	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Island	Forestry	

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Island	Marinas and Boating	Coastal Management
		P 05.01.03.01: Estuarine fauna, including the Florida manatee, should continue to be protected from damage or destruction by establishment of boating speed limits in any designated manatee habitats, and in waters containing seagrass beds.
		P 05.01.04.05: The revised LDRs should prohibit structures that impede circulation patterns in the lagoon.

Jurisdiction	Area of regulation	Comprehensive plan element and GOPs
Jupiter Island	Hydromodification	Coastal Management
		P 05.01.04.03: The revised LDRs should require future development on any unfortified areas of the estuarine shoreline that lack wetland vegetation to be planted with native vegetation in order to stabilize the shoreline, limit stormwater run-off and soil erosion, and trap sediments and other non-point source pollutants. Hardening of the shoreline, in the event plantings fail to achieve the purpose, should be undertaken in accordance with state and local regulations.

Table 3.10 — Ocean Breeze Park

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Ocean Breeze Park	Urban	Future Land Use
		P 1.8: No changes shall be permitted within the developed portions of the Town that would create a net decrease in available open space, or decrease the effectiveness of the existing drainage and stormwater management system. New development and redevelopment shall maintain a minimum of 35% open space in residential areas and 25% open space in commercial areas and meet the drainage and stormwater management regulations of the SFWMD. In the case of stormwater retention and detention requirements, the Town will work with the SFWMD to assure that management schemes fully recognize the unique percolation capacity of the Town's soils and any accrued benefits derived from xeriscape landscaping and minimal use of sod. [9J-5.006(3)4]
		Obj 4: Protection Of Natural Resources [9J-5.006(3) (b) 4]: The natural resource of the Indian River Lagoon shall continue to be protected by the Town by continued compliance with the Indian River Lagoon Management Plan and the Lagoon Surface Water Improvement and Management (SWIM) plan. Future development on lands west of the FEC railroad shall be allowed only upon a finding that the proposed development plan is consistent with protection of natural resources. (More detailed objectives and policies are contained in the Coastal Management Element of this plan.)
		P 1.3: Drainage Facilities - all new and/or reconstructed storm and surface water management systems shall provide for retention of first one inch of run-off from a one hour, three year storm event. The level of service standards for existing drainage facilities shall be determined by a drainage needs study to be completed by December 1991, which will use the Indian River Lagoon Management Plan and the Management and Storage of Surface Waters Permit Information Manual, Vol. IV to provide guidelines in increasing the quality of storm water run-off, and consider such interim measures as: (1) check dams to be placed in road side swales to hold water longer to increase water quality, and (2) diversion of rain water to undeveloped low spots, which will get water off of and away from roads and increase quality, being careful not to create a point-discharge that would create erosion. The study will base any recommendations for improvements upon a cost-benefit analysis. [9J-5.001(2) (c) 2.c.]
		P 10.1: Priorities for drainage facility replacement, correction of existing deficiencies and providing for future needs shall be based upon: a) cost-effectiveness, b) flood protection, c) control of surface water quality and erosion, and d) aquifer recharge. [9J-5.011(2) (c)1.]
		Obj 11: Coordinating Drainage Facility Needs With Capacity: To coordinate the extension of, or increase in the capacity of, drainage facilities to meet future needs by requiring all new development to meet: a) the permitting requirements of the SFWMD, and b) the level of service standards of this Comprehensive Plan concurrent with needs. [9J-5.011(2) (b) 2]

Ocean Breeze Park	Urban	Obj 12: Protecting Functions Of Natural Drainage Features: To protect the functions of natural drainage features (such as wetlands, natural outfalls, and natural drainage ways) through appropriate design of new development. [9J-5.011(2) (b)5]
		P 12.1: Land use and development shall be regulated to protect the functions of drainage features through application of the requirements of the SFWMD and new land development regulations which incorporate such measures as: a) vegetated littoral zones, b) landscaping design that protects the natural permeability of soils, and c) drainage system design that supports the continued function of natural drainage features. [Regional Goal 8.2.1] [9J-5.011(2)(c)4.]
		Coastal Management
		P 2.1: By December 1990, create and adopt an efficient flood plan and stormwater management plan to control run-off from A1A (Indian River Drive) to the Indian River Lagoon. These plans should be coordinated with Martin County. [9J-5.012(3)(c)3]
		P 5.1: Review and revise building codes to insure that coastal construction which degrades existing estuarine productivity is strictly controlled or prohibited.
		P 5.2: By 1991, review all non-point discharge from Ocean Breeze Park area to Indian River Lagoon to determine whether it may be the source of serious and significant erosion or significantly impacts to water quality or habitat value.
		P 5.3: Not to permit a multi-slip marina on any portion of the frontage which Ocean Breeze Park has on the Intracoastal waterway.
		P 5.4: By December 1990, the Town shall adopt an ordinance that addresses the specific and cumulative impacts of development or redevelopment upon wetlands, water quantity and wildlife habitat, including special attention to manatee habitats and seagrass beds. This ordinance shall include conditions to be included in negotiated planned development agreements. [9J-5.012(3)(c)1]
		Conservation
		P 1.2: Establish a floodplains ordinance by July 1991 for those areas which may be affected in the accommodation of flood waters. Said ordinance shall include the use of stormwater detention and/or retention, shoreline buffer zones, and on-site stormwater management. [9J-5.013(2)(c)9]
		P 1.5: Establish a program to control non-point sources of water pollution, including interim measures, as described in Policy 1.3 of the Infrastructure Element. As indicated, a planned study will include review of all non-point discharge from Ocean Breeze Park into the Indian River Lagoon to determine what is the source of soil erosion and does not unacceptably impact water quality or habitat value. [9J-5.013(2)(c)6]

Ocean Breeze Park	Intergovernmental Coordination	Intergovernmental Coordination
		Obj 1: To interact with officers, officials and staff of other jurisdictions to create a mechanism and process for intergovernmental coordination.
		P 1.1: To require the town engineer to meet from time to time with DER, DNR and SFWMD to interface on plans and policies for consistency.
		P 1.2: To require the Town Attorney to meet from time to time with the county counterpart and the representative of TCRPC to review legal aspects of plans and operations.
		P 2.1: The town shall coordinate intergovernmental management of the resources of the Indian River Lagoon through compliance with the adopted management plan for the Indian River Lagoon and cooperation with regulatory agencies. Those agencies include the SFWMD, Florida DER, Florida DNR, Florida HRS, U.S. EPA and U.S. COE. 9J-5.015(3) (c)6]

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Ocean Breeze Park	Agriculture	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Ocean Breeze Park	Forestry	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Ocean Breeze Park	Marinas and Boating	Coastal Management
		P 5.3: Not to permit a multi-slip marina on any portion of the frontage which Ocean Breeze Park has on the Intracoastal waterway.
		P 1.3: Restrict construction to eliminate the possibility of a multi-slip marina along the Indian River Lagoon within the town limits. [9J-5.013(2)(c)5]

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Ocean Breeze Park	Hydromodification	

Table 3.11 — Sewall's Point

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Sewall's Point	Urban	Future Land Use
		P 3.1: The Town will study and adopt land use regulations that will protect environmentally sensitive lands, endangered plant and animal species and historic resources and shall include: (a) Requiring developers to designate open space, recreation or conservation area(s) in all subdivisions; (b) Prohibiting the demolition of historic sites if an economical viable alternative exists. These regulations may include: (1) Environmental assessments for all significant developments; (2) relocation of endangered animal species.
		P 3.2: The land development regulations adopted in 1990 shall require significant development with three or more units include provisions for: (1) Protection of all water bodies, aquifers and estuaries by limiting surface water runoff to acceptable levels of service (see drainage subelement); (2) Management of the handling of hazardous waste and by sponsoring amnesty days; (3) Protection of wildlife and fisheries habitat through open space requirements...
		P 9.5: The Town shall authorize an inventory with Martin County's Soil and Water Conservation Department, within 24 months from adoption of the plan of existing septic tanks which contaminate water and environmentally sensitive lands. The Town shall review the feasibility of eliminating septic tanks in affected areas within 5 years from plan adoption.
		Sanitary Sewer
		Obj 1.0: Insure that there is no threat to the health, safety and welfare of the citizens or the environment arising from inadequate sewage disposal by obtaining a study of existing conditions and the cost feasibility of requiring hook up to Martin County facilities within 24 months from plan adoption. Urban sprawl is not a concern as buildout is expected by 2010 and no zoning changes are anticipated.
		P 1.1: The Town shall obtain within 24 months from plan adoption, a study to determine the effectiveness of existing septic tanks and to determine the cost of mandatory tie in to Martin County facilities.
		P 1.2: The Town's level of service of sanitary sewer facilities shall be septic tanks.
		P 1.3: To replace and correct existing facility deficiencies and to provide for future facility needs, the Town shall: a) Obtain, by 1991, a waste water study, the object of which is to study the adequacy of the septic tank system.
		Drainage and Natural Groundwater Aquifer Recharge
		P 1.1: A level of service standard for drainage facilities, building floors, roads and sites is hereby established as follows: Drainage Facility: underground facilities utilizing storm sewers -- 5 year/24 hour design storm.

Sewall's Point	Urban	P 1.2: Stormwater discharge facilities and management shall be in accord with Chapter 17-25, Florida Administrative Code, to prevent pollution of the waters surrounding the Town and to ensure the most beneficial uses of those waters. The following minimum water quality criteria is adopted in furtherance of this policy: Water quality criteria shall be greater than 2.5 times the percent of impervious site land area, but not less than 1 inch.
		P 1.3: The Town shall review its Land Development Regulations to bring them more in line with existing technical knowledge dealing with drainage and aquifer recharge. This shall include: (a) Storage area capacity should be created for any volume of surface water runoff displaced by fill or construction...
		P 2.1: The 1990 land Development Code shall require retrofitting of drainage facilities to bring them up to adopted LOS standards, as facilities undergo repair or renovation or become obsolete.
		Obj 3.0: The Town shall protect the functions of the Indian River as a natural drainage feature by regulating development in the 1990 Land Development Code to include restrictions on post-design runoff.
		P 3.1: Post-development runoff shall be limited to pre-development volume to protect against flooding and pollution. This shall be included in the 1990 Land Development Code rewrite.
		P 4.1: Lot coverage rules shall be strengthened during the 1990 Land Development Code rewrite so that no more than 50% of a dwelling lot may be impermeable.
		Potable Water
		P 3.1: Land development regulations shall require that surface and stormwater management systems be designed to maximize retention capability consistent with flood control requirements to be adopted in 1990.
		Coastal Management
		P 1.1: The Town shall limit specific and cumulative impacts of development on water quality and quantity, wildlife habitat, and living marine resources by: a) preserving sufficient natural upland habitat of each community type throughout the Town to maintain viable populations of all native plant and animal species, and representative stands of each habitat type. To accomplish this, the Town shall amend its land development regulations in 1990 to require preservation of 25% of the existing native habitat on each lot.
		P 1.2: The Town shall restore or enhance natural resources, estuaries, and drainage systems and adopt regulations of such resources, as follows: (c) A natural vegetated buffer shall be required adjacent to the Indian River Lagoon for all development.

Sewall's Point	Urban	P 1.4: The 1990 Land Development Code shall require retrofitting of substandard public drainage systems. Drainage systems shall be inspected during repairs, expansion, or redevelopment activities and be brought into compliance with current code requirements. This policy is intended to address water quality problems resulting from inadequately maintained systems, or those systems constructed before a complete understanding of the negative effects of storm water runoff quality on the marine environment.
		P 2.1: The Town will continue to utilize setbacks for shoreline uses and will revise its land development code to require a natural vegetated buffer between the Indian River and shoreline uses in 1990.
		Conservation
		P 4.1: The Town shall amend its Land Development Code in 1990 to require that site stabilization must occur no later than 60 days after vegetation removal and that seeding, wetting and mulching must be completed within 69 days from site clearing to minimize soil erosion and runoff.
		Obj 6.0: The Town shall amend its Land Development Code in 1990 to require that staff review Land Development applications for potential effects on fish, wildlife and habitat to protect and enhance wildlife and fish populations.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Sewall's Point	Hydromodification	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Sewall's Point	Marinas and Boating	Conservation
		P 6.4: The Town prohibits the development of public marina or boat ramp facilities due to their significant impact on marine habitats and species.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Sewall's Point	Forestry	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Sewall's Point	Agriculture	

Table 3.12 — Stuart

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Stuart	Urban	Future Land Use
		Obj A3: Natural resources of the City are identified in the Conservation Element as environmentally sensitive. The City shall include provisions in the land development regulations, adopted by the statutory deadline to preserve and protect natural resources, through such means as conservation easements, transfer of development rights, cluster development and other similar provisions. Future land uses shall be coordinated with the topography, soil conditions and natural resources during the site plan review process for each site.
		P A4.1: The City shall monitor its stormwater management and flood prevention ordinances for effectiveness and review the ordinances at least once every five years. Such ordinances shall be consistent with established Federal Emergency Management Agency (FEMA) flood insurance guidelines, rates and maps, as well as the latest SFWMD's stormwater ordinance criteria.
		Infrastructure
		P A1.3: The City's deep well is approaching capacity due to excessive infiltration and inflow (I/I) into the sewer system. The City is undertaking an I/I reduction program that includes the following: [3 listed] a) Elimination of combined sewers in the downtown area. Construction is currently in progress.
		P A1.8: The City shall continue to locate and remove stormwater and sanitary sewer interconnections. In case where removal of the interconnection is not economically feasible, consideration shall be given to removal and redesign during redevelopment activities.
		P A1.9: The City's Land Development Regulations shall be adopted by the statutory deadline and shall ensure stormwater treatment consistent with SFWMD permitting requirements.
		P A4.2: Post-development runoff volumes shall not exceed pre-development runoff volumes for a storm event of three-day duration and 25 year return frequency for parcels greater than one acre. The same criteria shall apply for a storm event of three day duration and 10 year return frequency for parcels less than one acre.
		P A4.3: The City shall, through the Public Works Department, coordinate all drainage design, construction and maintenance activities that occur within the city limits or affect the city in any way. This will require active and regular communication with and monitoring of Martin County, the SFWMD and the state DOT.
		P A4.4: By 1992, the City shall complete a Master Stormwater Drainage Plan that will address water quality and quantity and an on-going funding source.

Stuart	Urban	P A4.6: The City's Land Development Regulations shall be adopted by the statutory deadline and shall ensure stormwater treatment consistent with SFWMD permitting requirements.
		Conservation
		Obj A1: The City shall protect the quality of all surface waters within the city limits, especially the St. Lucie Estuary. To meet this objective, the City will adopt land development regulations by July 1990 which provide specific performance standards for regulating land use, public access, marina siting and activities, shoreline alteration and seawalls, dredging and filling activity and providing treatment of stormwater runoff and mangrove protection. By 1992, the City shall have completed a comprehensive drainage master plan which will address point sources of stormwater pollution. The City will participate with other agencies having resource management plans upon adoption of this plan and throughout the planning time frame.
		P A1.2: The City shall arrange for the removal or retrofitting of existing stormwater outfalls to the St. Lucie Estuary and its tributaries during redevelopment activities, where appropriate and consistent with DER rules and guidelines.
		P A1.3: The City shall coordinate with appropriate agencies that are implementing the Indian River Lagoon Aquatic Preserve Protection Plan, the Hutchinson Island Resource Management Plan, the North Fork of the St. Lucie River Aquatic Preserve Protection Plan, the SWIM plan for the Indian River Lagoon and other such resource management plans and programs as require the involvement of the City.
		P A4.2: New development shall preserve a buffer zone of 25 feet from the mean high water line of native vegetation which falls within the existing 25 foot setback area along waterways and within the flood plain if possible.
		Obj A5: Preserve and protect the functions and values of natural areas of vital concern to the environment of the City, through adoption of land development regulations by July 1990 which provide specific performance standards regulating land use, public access, marina siting and activities, wetlands, shoreline alteration and seawalls, dredging and filling activity and providing treatment of stormwater runoff, adequate upland buffering and mangrove protection. Natural areas of vital concern to the City include the St. Lucie estuary, coastal wetlands and shorelines, living marine resources (seagrass beds, fisheries and mangroves) native upland vegetative communities and wildlife habitats, especially endangered species habitat.
		P A5.1: Innovative land planning and development techniques which are sensitive to natural landscape and environmental conditions will be encourages and may be required during the site plan review process towards preservation of rare and unique upland and wetland habitats. Methods to encourage preservation of land will by through density bonuses for cluster development. Methods to require preservation will include minimum buffering requirements, mangrove, floodplain, stormwater management, landscape ordinances and wetlands alteration limitations.

Stuart	Urban	P A5.2: Protection and management of wetland and deepwater habitats shall be in a manner consistent with implementation of the TCRCPP, the North Fork of the ST. Lucie River and Indian River Lagoon Aquatic Preserve Management Plans, the St. Lucie Estuary Management Plan (SLEMP) and any other appropriate resource management plan that applies to resources within the city limits.
		Intergovernmental Coordination
		P A3.3: The City shall participate with appropriate agencies that are implementing the Indian River Lagoon Aquatic Preserve Protection Plan, the Hutchinson Island Resource Management Plan, the North Fork of the St. Lucie Aquatic Preserve Protection Plan and other resource management plans and programs as require the involvement of the city.
		Capital Improvement
		P A2.1: The City shall use the following level of service (LOS) standards in reviewing the impacts of new development and redevelopment upon provision of public facilities and services: Drainage Facilities -- LOS Standard Retention of half of the runoff from a 25 year, 3 day duration storm event on parcels greater than one acre or 10 year, 3 day duration storm event on parcels less than one acre as per SFWMD permit manual IV.
		Coastal Management
		P A1.1: The City shall establish a program and a set of standards to protect vegetative communities from adverse impacts of urban development. This program will be implemented through the City of Stuart Zoning Ordinance which will be revised by July 1990 to include measures for the protection, conservation or enhancement of Stuart's riverine wetland area and living marine resources.
		P A4.1: By 1992, the City shall adopt and implement a comprehensive drainage master plan and ordinance. This ordinance is intended to minimize degradation of surface waters through treatment of stormwater runoff. At a minimum, specified treatments shall include maximum feasible on-site retention, establishment of littoral zones in lake management systems and wetland areas and use of grassy swales for filtration. This policy shall apply to new systems. Further details of this plan are contained in policy A3.7 of the Infrastructure Element.
		P A4.2: Retrofitting of substandard public drainage systems shall occur during repair, expansion or redevelopment activities. This policy is intended to address water quality problems resulting from inadequately maintained systems, or those systems constructed previous to a complete understanding of the effects of stormwater runoff on water quality.
		P A4.6: With the exception of single slip residential docks, effective turbidity control mechanisms and procedures shall be used to protect water quality in areas adjacent to construction activities.

Stuart	Urban	Obj A5: To protect and preserve the functions and values of marine natural systems, through adoption of land development regulations by July 1990 which provide specific performance standards regulating land use, public access, marina siting and activities, shoreline alteration and seawalls, dredging and filling activity; and providing treatment of stormwater runoff, adequate upland buffering and mangrove protection. These systems serve a multitude of functions, including but not limited to, wildlife habitat, erosion control and flood control. Further, the City will develop intergovernmental coordination mechanisms with appropriate federal, state, regional and local agencies for the protection of natural resources and develop education programs to increase public awareness of environmental protection throughout the planning time frame.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Stuart	Agriculture	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Stuart	Forestry	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Stuart	Marinas and Boating	Conservation
		Obj A5: Preserve and protect the functions and values of natural areas of vital concern to the environment of the City, through adoption of land development regulations by July 1990 which provide specific performance standards regulating land use, public access, marina siting and activities, wetlands, shoreline alteration and seawalls, dredging and filling activity and providing treatment of stormwater runoff, adequate upland buffering and mangrove protection. Natural areas of vital concern to the City include the St. Lucie estuary, coastal wetlands and shorelines, living marine resources (seagrass beds, fisheries and mangroves) native upland vegetative communities and wildlife habitats, especially endangered species habitat.

Stuart	Marinas and Boating	P A5.2: Protection and management of wetland and deepwater habitats shall be in a manner consistent with implementation of the TCRCPP, the North Fork of the ST. Lucie River and Indian River Lagoon Aquatic Preserve Management Plans, the St. Lucie Estuary Management Plan (SLEMP) and any other appropriate resource management plan that applies to resources within the city limits.
		Coastal Management
		P A2.2: Public access to the river shall be available, but managed so that the environmental values of the system can be enjoyed, but overburdened by users. This shall include the adoption by 1990 of a policy to control the anchorage of live aboard boats defined as: transient or residential sail or power boats with marine sanitary facilities which discharge into the sanctuary.
		Obj A5: To protect and preserve the functions and values of marine natural systems, through adoption of land development regulations by July 1990 which provide specific performance standards regulating land use, public access, marina siting and activities, shoreline alteration and seawalls, dredging and filling activity; and providing treatment of stormwater runoff, adequate upland buffering and mangrove protection. These systems serve a multitude of functions, including but not limited to, wildlife habitat, erosion control and flood control. Further, the City will develop intergovernmental coordination mechanisms with appropriate federal, state, regional and local agencies for the protection of natural resources and develop education programs to increase public awareness of environmental protection throughout the planning time frame.
		P A6.1: The City shall give priority in marine development to water dependent uses over other uses. The City Zoning Code shall be amended to include and reflect the coastal zone to encourage the preferred uses.
		P A6.2: The City shall adopt the Martin County criteria for marine siting for consistency. The City will develop and adopt effective criteria in its development and site plan review procedures for all marina projects.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Stuart	Hydromodification	Coastal Management
		P A4.5: The City shall prohibit canals as defined in this Section. For purposes of this policy a canal is defined as any artificial waterway providing access to waters of the State or to any of the rivers, streams, creeks, canals or other waters of the State or their tributary systems for the purposes of navigation, aesthetics, recreation and/or enhancement of property. This definition excludes appropriately designed swales and ditches approved by the Public Works Director as necessary for controlled outflow of surface water.

Table 3.13 — St. Lucie County

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
St. Lucie County	Urban	Future Land Use
		P 1.1.4.3.g: The establishment of minimum specific requirements to provide efficient, centralized infrastructure (potable water and sanitary sewer). Include specific restrictions on the use of septic tanks, individual wells, and package plants in planned unit developments.
		P 1.1.5.8: In conjunction with Policy 1.1.5.9, new industrial development shall be located in those areas that are serviced with acceptable water and wastewater facilities that will not contribute to the degradation of surface water quality, or in areas that can be provided those services concurrent with the development of the property.
		P 1.1.5.10: As provided for under Policy 1.1.5.1, construction of new residential development at densities greater than two units per acre shall only be permitted when central or on-site water and central or on-site wastewater systems are available or will be provided concurrent with the impacts of development, consistent with the adopted levels of service found in the plan.
		P 1.1.9.7: Create along the identified water courses below, the following conservation overlay for inclusion within the County's Land Development Regulations. Effective area, Unincorporated areas only. Zone A 0 to 75 feet from the average high water mark No development activity or shoreline alteration other than that associated with the construction of a private access point, including docks if permitted under applicable laws, to the river's edge shall be permitted. The indiscriminate removal of native or indigenous vegetation is prohibited, with exception of selective clearing for maintenance or safety considerations. Such vegetative removal shall be in accordance with the provisions of the St. Lucie County Land Development Regulations.
		P 1.1.9.8: St. Lucie County shall by August 1990, include within its Land Development Regulations requirements for the immediate (within 5 days of alteration) reseeding or stabilization of areas cleared for development activities. Clearing for site construction shall not commence until appropriate authorizations for such activities have been granted pursuant to the County's Tree and Habitat protection regulations, reference P 1.1.8.6.
		P 1.1.9.10: The developer of any site shall be responsible for the on-site management of runoff in a manner so that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions.

St. Lucie County	Urban	P 1.1.9.15: New development activities should be consistent with the soil conditions in the area in which the activity is proposed. In those instances where soil modifications are necessary, all activities should utilize best management practices as identified by the Soil Conservation service.
		Sanitary Sewer
		P 6A.1.4.1: Develop and implement guidelines for on-site disposal systems. These guidelines will include: establishing general requirements for the construction, use, and abandonment of on-site sewage disposal systems; providing for permits with conditions and approvals; providing for standards for the approval of applications for on-site sewage disposal system; providing for conditions under which on-site sewage disposal systems shall not be used; providing for system size determination; providing for soil classification data; providing for percolation tests; providing for alternative systems; and, providing for permit fees.
		Drainage
		P 6C.1.1.2: As a part of the development of the County's Land Development Regulations, the County shall incorporate, as appropriate, the best management practices of the SFWMD as interim drainage standards until the completion of the Stormwater Master Plan.
		P 6C.1.1.3: The level of service standard for drainage shall be the 10 year/1 day storm event; a more refined level of service standard will be determined by the Stormwater Master Plan and will be proposed through a Comprehensive Plan Amendment by August 1, 1991.
		P 6C.1.1.4: When the level of service standard is established for drainage subsequent to the completion of the County-wide Stormwater Master Plan (as indicated in P 6C.1.1.1), the level of service standard shall include performance standards for water quality and flood control. Appropriate local and state regulations specifying stormwater quality standards shall be incorporated by reference into the drainage level of service standard to measure performance of systems which are designed to remove pollutants from run-off. Appropriate regulations specifying ambient water quality standards shall be referenced to prevent further degradation of surface and groundwater by run-off from stormwater facilities built prior to stormwater quality regulations taking effect in 1982.
		Obj 6C.1.3: By August 1, 1990, the County shall enact Land Development Regulations which support the protection and maintenance of the natural functions (flow and storage) of the 100-year floodplain and other natural drainage features.

St. Lucie County	Urban	P 6C.2.1.2: No development authorizations shall be issued unless there is provided to St. Lucie County assurance that all required drainage improvements will be provided for both on-site and off-site.
		P 6C.2.1.3: No final certificate of occupancy, as may be further defined in the Land Development Regulations, shall be issued until all drainage improvements, both on-site and off-site, for the particular development have been inspected and approved by St. Lucie County or other appropriate authority.
		Obj 6C.3.1: To improve the water quality level of areas that fail to meet potable standards and to prevent the further contamination of the surface aquifer.
		P 6C.3.1.4: To encourage the development of a series of agricultural reservoir areas to reduce the impacts of agricultural fertilizer and other related chemical applicants on the existing potable wellfields in the eastern portions of the County.
		P 6C.3.1.6: The development of County Land Development Regulations shall address comprehensive stormwater management including consideration of the following: a) the use of stormwater detention and/or retention; b) streambank and shoreline buffer zones; and c) general design and construction standards for on-site stormwater management.
		P 6C.3.2.4: No Conditional Uses for sand mining and no rezonings to Industrial, Extraction (IX) will be granted within public potable water supply recharge areas designated through the Wellfield Protection Ordinance; when the information is available to designate aquifer recharge areas, this policy will be revised through a Comprehensive Plan Amendment to include those areas.
		Coastal Management
		P 7.1.1.3: Erosion control measures shall be limited to those that do not interfere with the natural resources and processes of the coastal area based on locally determined criteria that is consistent with the Federal and State regulations.
		P 7.1.1.6: The County shall continue to coordinate with appropriate state agencies in meeting the goals and policies of the Indian River Lagoon Aquatic Preserves Management Plan, the North Fork of the St. Lucie River Aquatic Preserve Management Plan, and the Indian River Lagoon Surface Water Improvement and Management Plan. Coordination will consist of, at a minimum, continual participation on applicable committees and task forces as well as the provision of administration and fiscal support.

St. Lucie County	Urban	P 7.1.2.3: By August 1, 1990, the County shall enact land development regulations which require a minimum fifty (50) foot buffer zone of native upland and transitional vegetation along rivers, creeks, and estuaries, to be maintained from the landward extent of state waters or from mean high water of the rivers, creeks, and estuaries, whichever is greater. However, setbacks for the North Fork of the St. Lucie River shall be governed by those set out in the Land Use Element to the extent that those requirements may be more restrictive.
		P 7.1.2.4: A buffer zone of native upland edge (i.e., transitional) vegetation shall be provided and maintained around isolated wetlands and deepwater habitats which are constructed or preserved on new development sites. The buffer zone may consist of preserved or planted vegetation but shall include canopy, understory, and ground cover of native species only. The edge habitat shall begin at the upland limit of any wetland or deepwater habitat. As minimum, ten (10) square feet of such buffer shall be provided for each linear foot of wetland or deepwater habitat perimeter that lies adjacent to uplands. This upland edge habitat shall be located such that no less than fifty (50) percent of the total shoreline is buffered by a minimum width of ten (10) feet of upland habitat. The upland buffer requirement does not apply to drainage canals or stormwater conveyance systems requiring periodic maintenance.
		P 7.1.2.5: By December 31, 1994, all mosquito impoundments shall be assessed to determine if they provide multiple functions of marine fisheries habitat, water quality enhancement and adequate mosquito control. Particular attention shall be given to the differences between impoundments that are managed versus those that are breached or unmanaged.
		P 7.1.2.6: By August 1, 1990, the County shall enact land development regulations which require the following information on site plans for new development: a) The location and extent of wetlands located on the property; and b) Measures to assure that normal flows and quality of water will be provided to maintain wetlands after development.
		Obj 7.1.4: Estuarine Water Quality. St. Lucie County shall strive to obtain or maintain water quality and trophic state index classifications of "good" for the Indian River Lagoon, Five Mile Creek, Ten Mile Creek and the North Fork St. Lucie River by 2000. The County shall enact appropriate regulations which provide for the maintenance or improvement of water quality.
		P 7.1.4.1: By August 1, 1990, the County shall enact land development regulations which include locally determined drainage criteria which are consistent with those of the SFWMD and DER and which at a minimum shall prohibit new point source discharges of less than the 25-year storm event.

St. Lucie County	Urban	P 7.1.4.2: In order to reduce the impact of effluent from sewage treatment plants on the lagoon, highest priority shall be given to sewage treatment plants that are or have been in violation of DER treatment standards, or setback standards from Class II waters. These plants shall be required to connect to new or existing public or private centralized sewage treatment plants when such plants or services are provided within the applicable service areas.
		P 7.1.4.4: In order to reduce non-point source pollutant loadings and improve the functioning of the County's drainage system, the dumping of debris of any kind, including yard clippings and trimmings, into drainage ditches, stormwater control structures, the Indian River Lagoon, North Fork of the St. Lucie River, Five Mile Creek, Ten Mile Creek and tributaries shall be prohibited.
		P 7.1.4.6: By the year 1995, a plan shall be prepared and adopted for the central collection, treatment and disposal or effluent from all developments on the barrier island that are not currently serviced by such facilities.
		P 7.1.4.10: The County shall continue to address pollution problems identified in the data and analysis section of this element through: a) continual cooperation in SWIM programs; b) the adoption of a stormwater management ordinance by August 1, 1990; c) adoption of regulations to improve control of illegal dumping into canals, ditches and waterways, and increase implementation of urban and agricultural best management practices; and d) support of a western reservoir that is economically and environmentally feasible to reduce freshwater flows into the lagoon.
		Conservation
		Obj 8.1.2: By August 1, 1990, the County shall enact land development regulations which require the conservation, appropriate use, and protection of surface waters.
		P 8.1.2.1: The development of County land development regulations shall address comprehensive stormwater management including the following: a) the use of stormwater detention and/or retention; b) streambank and shoreline buffer zones; c) general design and construction standards for onsite stormwater management; d) best management practices for urban and agricultural development; and e) standards for new discharges to Outstanding Florida Waters.
		P 8.1.2.3: St. Lucie County shall evaluate the use of the following mosquito control techniques during the development of the new stormwater regulations: a) maintenance of any required littoral areas and upland buffers; b) a one (1) foot, or other appropriate, buffer between the bottom of stormwater ponds and the water table; and c) fish ponds for use during low water periods.

St. Lucie County	Urban	P 8.1.2.4: St. Lucie County shall request from the SFWMD with appropriate administrative and/or fiscal support, a project which evaluate the economic and environmental feasibility of a reservoir in the western parts of the County. At a minimum, the project should consider reductions of freshwater inputs and stormwater pollutants to the surface waters within the County, as well as conservation of water resources.
		P 8.1.4.3: The land development regulations shall require a minimum fifty (50) foot buffer zone of native upland and transitional vegetation along rivers, creeks, and estuaries, to be maintained from the landward extent of state waters or from Mean High Water of the rivers, creeks, and estuaries; whichever is greater. However, setbacks for the North Fork of the St. Lucie River shall be governed by those set out in the Land Use Element.
		P 8.1.4.4: The land development regulations shall require a buffer zone of native upland edge (i.e., transitional) vegetation to be provided and maintained around wetland and deepwater habitats which are constructed or preserved on new development sites. The buffer zone may consist of preserved or planted vegetation but shall include canopy, understory, and ground cover of native species only. The edge habitat shall begin at the upland limit of any wetland or deepwater habitat. As a minimum, ten square feet of such buffer shall be provided for each linear foot of wetland or deepwater habitat perimeter that lies adjacent to uplands. This upland edge habitat shall be located such that no less than 50 percent of the total shoreline is buffered by a minimum width of ten feet of upland habitat.
		P 8.1.4.5: The County shall cooperate with DER, DNR, SFWMD and the U.S. COE on their dredge and fill permitting responsibilities by providing comments where appropriate on any applicable County wetland regulation.
		P 8.1.4.6: The land development regulations shall include the use of programs to protect or maintain wetlands, such as reduced paving, conservation easements, cluster site planning and micrositing of buildings.

St. Lucie County	Urban	Capital Improvements
		P 11.1.1.15: The standards for levels of service for Category A Public Facilities, County Stormwater Management Systems and other major stormwater conveyance systems, shall be the 10 year/1 day storm event. When the level of service standard is established for drainage subsequent to the completion of the County-wide Stormwater Master Plan (as indicated in P 6C.1.1.1), the LOS standard shall include performance standards for water quality and flood control. Local and state regulations specifying stormwater quality standards shall be incorporated by reference as part of the drainage LOS standard to measure performance of systems which are designed to remove pollutants from run-off. Regulations specifying ambient water quality standards shall be referenced to protect and prevent further degradation of surface and groundwater by run-off from stormwater facilities.
		P 11.1.1.31: The standards for level of service for Category C Public Facilities, Municipal Stormwater Management, shall be the 10 year/1 day storm event. When municipal plans adopt a level of service, this element shall be amended to adopt the level of service for each municipality.
		P 11.1.3.8.b: The standards for levels of service of Category A and Category C public facilities shall be applied to the issuance of development orders on the following geographic basis: A. Public facilities which serve less than the entire County shall achieve and maintain the standard for levels of service within their assigned service area as defined by the Board of County Commissioners. No development order shall be issued in an assigned service area or impact area if the standards for levels of service are not achieved throughout the assigned service area or impact area for the following public facilities: 1) Arterial and Collector Roads: In order to achieve and maintain the level of service standards as adopted in the Traffic Circulation Element, developments shall address the mitigation of all potential project impacts on the roadway network in their traffic circulation plans. 2) Stormwater Management Systems: Drainage Sub-Basin 3) Potable Water Systems: Treatment Plant Service Area 4) Sanitary Sewer Systems: Treatment Plant Service Area 5) District Parks and Recreational Facilities: Planning Area 6) Neighborhood Parks and Recreational Facilities: (a) Planning Area or applicable area of service for significant impact. (b) Project boundaries, for projects providing neighborhood park(s) sufficient, at a minimum to meet project demand.

St. Lucie County	Urban	P 11.1.4.3: The County shall amend its land development regulations to provide for a system of review of various applications for development orders which applications, if granted, would impact the levels of service of Category A and Category C public facilities. Such system of review shall assure that no final development order shall be issued which results in a reduction in the levels of service identified in P 11.1.1.12 through 11.1.1.35. The land development regulations shall address the following, at a minimum, in determining whether a development order can be issued. A. Review of Applications for Final Development Orders. No final development order shall be issued by the County after July 31, 1990, or such earlier date as may be adopted by the Board of County Commissioners, unless there shall be sufficient capacity of Category A and Category C public facilities to meet the standards for levels of service for the existing development and for the proposed development according to the following deadlines: [2 listed] (2) Prior to the issuance of the building permit, assurance as to the completion for the following public facilities within the next twelve months must be provided: (a) Arterial and collector roads. (b) Parks and recreation. (c) Storm water management.
		P 11.1.4.8: The County shall establish and maintain a Concurrency Implementation and Monitoring System. The System shall consist of the following components: A. Annual report on the capacity and levels of service of public facilities compared to the standards for levels of service adopted in Policies 11.1.1.12 through 11.1.1.35. This report will function as a public information source to summarize the actual capacity of public facilities, and forecast the capacity of public facilities for each of the five succeeding fiscal years. The forecast shall be based on the most recently updated Schedule of Capital Improvements in this Capital Improvements Element. The annual report shall also summarize and forecast capacities and levels of service for comparison to the standards adopted in P 11.1.1.12 through 11.1.1.35, but such portion of the annual report shall be for information purposes only and shall not pertain to the issuance of development orders by the County.

St. Lucie County	Urban	B. Public Facility Capacity Review. The County shall use the procedures specified in P 11.1.4.3., above, to enforce the requirements of P 11.1.3.6 through 11.1.3.8 and to assure that public facilities and services needed to support development are available concurrent with the impacts of such developments. A separate record shall be maintained during each fiscal year to indicate the cumulative impacts of all development orders approved during the fiscal year-to-date on the capacity of public facilities as set forth in the most recent annual report on capacity and levels of service of public facilities. The land development regulations of the County shall provide that applications for development orders that are denied because of insufficient capacity of public facilities may be resubmitted after a time period to be specified in the land development regulations. Such time period is in lieu of, and not in addition to, other minimum waiting periods imposed on applications for development orders that are denied for reasons other than lack of capacity of public facilities. Land development regulations shall require that development commence within a specified time after a development order is issued, or the development order shall expire, subject to reasonable extensions of time based on criteria included in the regulations. The land development regulations also shall provide for the County to reserve capacity for approved final development orders for a specified period of time.
		P 11.1.5.1: Publicly funded infrastructure shall not be constructed within the Coastal High Hazard Area unless the expenditure is for: A. Restoration or enhancement of natural resources or public access; and F. The retrofitting of stormwater management facilities for water quality enhancement of stormwater runoff. [7 listed]

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
St. Lucie County	Agriculture	Future Land Use
		P 1.1.9.15: New development activities should be consistent with the soil conditions in the area in which the activity is proposed. In those instances where soil modifications are necessary, all activities should utilize best management practices as identified by the Soil Conservation service.
		Drainage
		P 6C.3.1.4: To encourage the development of a series of agricultural reservoir areas to reduce the impacts of agricultural fertilizers and other related chemical applicants on the existing potable wellfields in the eastern portions of the County.
		Conservation
		P 8.1.2.1: The development of County land development regulations shall address comprehensive stormwater management including the following: [5 listed] d. best management practices for urban and agricultural development.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
St. Lucie County	Forestry	

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
St. Lucie County	Marinas and Boating	Future Land Use
		P 1.1.9.7: Create along the identified water courses below, the following conservation overlay for inclusion within the County's Land Development Regulations. Effective area, Unincorporated areas only. Zone A 0 to 75 feet from the average high water mark No development activity or shoreline alteration other than that associated with the construction of a private access point, including docks if permitted under applicable laws, to the river's edge shall be permitted. The indiscriminate removal of native or indigenous vegetation is prohibited, with exception of selective clearing for maintenance or safety considerations. Such vegetative removal shall be in accordance with the provisions of the St. Lucie County Land Development Regulations.
		Coastal Management
		P 7.1.7.1: The following criteria shall be applied to all proposed marinas during the preparation of marina siting plans: [14 listed] a. Preference shall be given to sites which have been legally disturbed or identified as suitable in local marina siting plan elements as opposed to sensitive areas. d. Docking facilities shall only be approved which require minimal or no dredging and/or filling to provide access by canal, channel, or road, unless otherwise permitted by the appropriate federal and state agencies g. Sewer pump-out service shall be made available at all marinas capable of servicing or mooring boats for live aboard purposes or boats which require pump-out service. i. Prior to operation of marina fueling facilities, the developer shall concurrently submit to the County a copy of the application for a terminal facility and the applicable portion of the DNR "Florida Coastal Pollutant Spill Contingency Plan." The plan shall describe the methods of fuel storage, personnel training, methods to be used to dispense fuel and all the procedures, methods, materials and emergency response contractors to be used in the event of a spill.
		P 7.1.7.3: A marina siting element shall be developed by December 31, 1991 for incorporation into this element. The marina siting element shall be consistent with the applicable policies under this objective or, based on locally determined criteria, include proposed amendments to these policies for consideration by the County Commission.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
St. Lucie County	Hydromodification	Conservation
		P 8.1.2.3: St. Lucie County shall evaluate the use of the following mosquito control techniques during the development of the new stormwater regulations: [3 listed] b. A one (1) foot, or other appropriate, buffer between the bottom of stormwater ponds and the water table.
		P 8.1.2.4: St. Lucie County shall request from the SFWMD, with appropriate administrative and/or fiscal support, a project which evaluates the economic and environmental feasibility of a reservoir in the western parts of the County. At a minimum, the project should consider reductions of freshwater inputs and stormwater pollutants to the surface waters within the County, as well as conservation of water resources.
		P 8.1.10.5: The County shall request from the SFWMD, with appropriate administrative and/or fiscal support, a project which evaluates the economic and environmental feasibility of a reservoir in the western parts of the County for the purposes of water conservation, as well as stormwater management and improved surface water quality.

Table 3.14 — Fort Pierce

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Fort Pierce	Urban	Future Land Use
		P 1.1.4.4: Site developers should be responsible for meeting local and SFWMD stormwater runoff and pollutant loads.
		P 1.1.4.11: Land use regulations shall be developed which regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management consistent with the Infrastructure Element of this Comprehensive Plan.
		P 1.1.6.1: As is practicable, applicable provisions of the Management Plan should be integrated into the City's performance standards for development.
		P 1.1.12.1: In accordance with section 163.3202, F.S., the city shall review and revise where necessary, land development regulations to ensure that they contain specific and detailed provisions intended to implement the adopted Comprehensive Plan, and which as a minimum: d) Regulate development which has a potential to contaminate water, soil or crops; (11 listed).
		Infrastructure
		P 4.1.1.2: Priority shall be given to work programs for continued monitoring of the effluent toxicity issue at the wastewater treatment plant, and extension of sanitary sewer lines into those areas of the City currently using septic tanks. It should be recognized that monitoring of the effluent toxicity is a continuing program and initiatives have been taken to comply with the Department of Environmental Regulation requirements.
		P 4.1.3.7: By 1992, the City shall complete a comprehensive city-wide drainage plan which shall include system capacities, levels of service, life expectancy and stormwater quality considerations.
		P 4.1.4.4: The following levels of service standards are hereby adopted and shall be used as the basis for determining the availability of facility capacity and the demand generated by development: [there are five other facilities/LOS listed] facility: Drainage facilities -- For storm sewers, the one year storm event; for canals and culverts, the one day/three year storm event; and for individual development sites, applicable criteria as per SFWMD Permit Information Manual, Volume IV such that post-development runoff shall not exceed pre-development runoff and the first one inch of runoff shall be retained in all cases unless otherwise permitted under SFWMD regulations.
		P 4.1.6.4: The City shall continue its efforts to increase retention/detention capacity of drainage basins in order to reduce stormwater outfall runoff to the Indian River Lagoon and increase ground water aquifer recharge potential. An example of this effort is the planned retention area for the Virginia Avenue Outfall.

Fort Pierce	Urban	P 4.1.6.5: The City shall continue to actively enforce new development stormwater drainage requirements with the requirements of the SFWMD Permit Information Manual, Volume IV.
		P 4.1.6.6: During redevelopment activities, the City shall, where feasible, retrofit the existing stormwater outfall system to provide for greater retention/detention capability.
		P 4.1.6.9: The City shall adopt land development regulations and a public education program which provide for the following: a) Surface water management standards consistent with those of the SFWMD so as to require that discharges from all new development meet Class III State Water Quality Standards; b) Strict sediment control measures to deter erosion and loss of soil into waterways; c) A cooperative plan between the SFWMD, county and City for inspection and maintenance of existing public and private stormwater management facilities; d) A cooperative plan for the identification and elimination of illegal discharges and connections to drainage waterways; e) Proper pesticide and fertilizer application practices; f) Use of turf blocks for patios, sidewalks, driveways, etc., to prevent increasing impervious surfaces; g) Maintaining motor vehicles to prevent the accumulation of oils, grease, transmission fluid, etc. on driveways where it might be conveyed to surface waters by runoff; and, h) Regularly collecting and properly composting and disposing of yard debris to prevent the accumulation of detritus which can adversely affect surface water quality.
		P 4.1.6.10: The City shall continue to participate in joint programs with the SFWMD, the county and the DOT for the improvement of water quality in the Virginia Avenue Canal.
		P 4.1.6.11: By 1991, the City, in conjunction with the SFWMD and the County, shall commission a study for the improvement of water quality within Moore's Creek. The study shall identify specific alternatives with costs and funding mechanisms. The City and other agencies shall agree upon a specific improvement and funding program and begin design plans by no later than 1992. Final construction shall be completed by no later than 1995.
		P 4.1.6.12: The City shall continue to participate with the SFWMD and the County in the design and implementation of SWIM Plan water quality improvement programs.
		Coastal Management
		P 5.1.1.8: Shoreline alteration and construction which degrades existing estuarine productivity shall be prohibited unless it provides necessary access to marine resources, abates serious and significant erosion, and does not significantly impact water quality or habitat value.
		P 5.1.1.9: Pursuant to S163.3202, F.S., the city shall adopt regulations requiring appropriate natural vegetated buffers adjacent to the Indian River Lagoon system and its major tributaries.

Fort Pierce	Urban	Obj 5.1.3: The city shall, within one year of the Comprehensive Plan adoption, revise its land development regulations to provide for the maintenance or improvement of water quality in the Indian River Lagoon.
		P 5.1.3.1: Adopt or amend drainage regulations which are consistent with those of the SFWMD and the DER and which at a minimum should prohibit new point sources of runoff from discharging into the Indian River Lagoon for less than the 25-year storm event.
		P 5.1.3.3: No structures which constrict water circulation in the lagoon should be permitted unless adequate environmental studies have been undertaken.
		P 5.1.3.4: In order to reduce non-point source pollutant loadings and to improve and maintain the functioning of the city's drainage system, dumping of debris of any kind, including yard clippings and trimmings, into drainage ditches, stormwater control structures and the Indian River Lagoon should be prohibited.
		P 5.1.6.1: New sanitary sewer facilities in the hurricane vulnerability zone should be evaluated for possible flooding to prevent inflow and equipment damage. Raw sewage should not leak from sanitary sewer facilities during flood events.
		Obj 5.1.12: The city shall assist in enforcing regulation adopted by the DNR, DER, HRS, SFWMD and other appropriate federal, state and local governments for the improvements of the water quality of the Indian River Lagoon, and shall, in accordance with section 163.3202, F.S., adopt regulations of its own for the same purpose.
		P 5.1.12.3: In accordance with section 163.3202, F.S., drainage regulations shall be adopted which are consistent with those of the SFWMD and the DER without exemptions and which at a minimum shall prohibit new point sources of run-off from discharging into the lagoon for less than the 25-year storm event.
		P 5.1.12.5: Issuance of a development order or permit for new development or redevelopment shall be conditioned upon demonstration of compliance with applicable federal, state and local drainage system permit requirements.
		P 5.1.12.9: Issuance of all building permits shall be conditioned upon demonstration of compliance (e.g. signed permits) with applicable local, state and federal requirements for on-site wastewater treatment systems necessary to service the proposed development.
		Conservation
		P 6.1.2.1: The city shall review and revise the drainage regulations to ensure best management practices are required.

Fort Pierce	Urban	P 6.1.2.6: All new developments must meet the surface water and stormwater management criteria set forth by the SFWMD and meet minimum water quality standards set forth by DER.
		P 6.1.4.1: The city shall utilize the St. Lucie County Soil and Water Conservation District guidelines in development activities for minimizing soil erosion.
		Intergovernmental Coordination
		P 8.1.2.2: Support the development and adoption of interlocal agreements with the affected local governments to coordinate the management of the Indian River Lagoon, Savannas and other inter-jurisdictional natural resources.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Fort Pierce	Agriculture	Conservation
		P 6.1.2.1: The city shall review and revise the drainage regulations to ensure best management practices are required.
		Intergovernmental Coordination
		P 8.1.2.2: Support the development and adoption of interlocal agreements with the affected local governments to coordinate the management of the Indian River Lagoon, Savannas and other inter-jurisdictional natural resources.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Fort Pierce	Forestry	Conservation
		P 6.1.2.1: The city shall review and revise the drainage regulations to ensure best management practices are required.
		Intergovernmental Coordination
		P 8.1.2.2: Support the development and adoption of interlocal agreements with the affected local governments to coordinate the management of the Indian River Lagoon, Savannas and other inter-jurisdictional natural resources.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Fort Pierce	Marinas and Boating	Coastal Management
		P 5.1.1.8: P 5.1.1.8: P 5.1.1.8: Shoreline alteration and construction which degrades existing estuarine productivity shall be prohibited unless it provides necessary access to marine resources, abates serious and significant erosion, and does not significantly impact water quality or habitat value.
		P 5.1.1.11: The following criteria should be applied to all proposed marinas and should be considered during the preparation of a marina siting plan: [12 items listed] 4) Docking facilities will only be approved which require minimal or no dredging and/or filling to provide access by canal, channel or road; 7) Sewage pump-out service shall be made available at all marinas capable of servicing or accepting boats inhabited overnight or boats which require pump-put service; 8) Dockside restrooms and showers should be provided at marinas; and 9) In the event marina fueling facilities are developed, adequate and effective measures shall be taken to prevent contamination of area waters from spillage or storage tank leakage.
		P 5.1.3.3: No structures which constrict water circulation in the lagoon should be permitted unless adequate environmental studies have been undertaken.
		P 5.1.12.2: All residential docks shall require approval by the DNR, DER, COE and the City of Ft. Pierce prior to construction.
		Intergovernmental Coordination
		P 8.1.2.2: Support the development and adoption of interlocal agreements with the affected local governments to coordinate the management of the Indian River Lagoon, Savannas and other inter-jurisdictional natural resources.

Jurisdiction	Area of Regulation	Comprehensive Plan Element and GOPs
Fort Pierce	Hydromodification	Coastal Management
		P 5.1.12.7: The city shall meet with the Mosquito Control District a minimum of once a year to discuss needed improvements to the canal system. Any improvement plans shall be agreed to by both parties and the county-wide drainage authority or drainage advisory board once it becomes active.
		P 5.1.12.8: Issuance of a development order or permit for new development or redevelopment having an impact upon existing or future Mosquito Control District canals shall be conditioned upon the Mosquito Control District approval of the drainage system (s) associated with the development.
		Intergovernmental Coordination
		P 8.1.2.2: Support the development and adoption of interlocal agreements with the affected local governments to coordinate the management of the Indian River Lagoon, Savannas and other inter-jurisdictional natural resources.

Each meeting began with a description of the scope of the research project with DEP and how it fits into the overall picture of EPA's 6217 program. We explained to the districts that the primary focus in this project is on local comprehensive planning and land development regulations that relate to the two study areas. We specifically asked them to help us better understand how local governments address issues in the five areas that EPA has identified, and how well they do this in their local plans and LDRs. Discussion proceeded in both meetings to general problems associated with nonpoint source pollution in each district that relate to the two study areas associated with this project.

As a result of these discussions, the two research teams became much more familiar with how each district handles issues that arise in the five EPA areas of interest, e.g. how do they permit agricultural uses, do their regulations apply to forestry operations, how do they work with landowners to encourage best management practices, etc. We also focused as much as possible on how these five issue areas are handled at the local government level, and what improvements could be achieved through the local planning and LDR process.

Notes from each meeting follow in this section of the report.

Meeting notes from FSU NPS research team's visit with staff from Southwest Florida Water Management District, December 3, 1993

Location: DEP district office, Tampa

SWFWMD
Richard Alt (for Alba Evans)
Mike Hulcamp
Trisha Neasman
Joe Quinn

DEP
Dick Williams

FSU, Homer Hoyt Center for Land Economics and Real Estate
Jim May
Gary Cornell
Andrew Dzurik
Claudia Boyles
Tim Kelly
Dennis Smith

Overview of development of Coastal Nonpoint Source Control Plan

In Section 6217 of the 1990 amendments to the federal Coastal Zone Management Act, EPA has identified 5 strategy areas that are priorities for controlling nonpoint source pollution. (Agriculture, Forestry, Urban, Recreational Boating/Marinas, and Hydromodification Projects)

EPA and NOAA are both involved in approval of the state's plan prepared under Section 6217 requirements. Florida is already addressing many of the 6217 issues in Chapters 373 and 403, F.S., and, more specifically, the SWIM program. DEP is unclear on the extent to which local governments are incorporating measures to address EPA's objectives for controlling nonpoint source pollution through Chapter 163, F.S., through local government comprehensive plans and land development regulations. There is a perception of redundancy in policy and efforts among NEP, NPDES, and DEP.

How can 373 and 163 work together to meet the EPA objectives?
Comp Plans and LDR's need to address specific stormwater issues.

FSU and FAU/FIU Joint Center's research project

Purpose of the trip:

1) Introduction to the research project and what we are doing under the 6217 program.

2) How SWFWMD deals with nonpoint source pollution, especially in EPA's 5 priority areas.

3) District staff was initially interested in how Manatee, Hillsborough, and Palmetto were chosen for this study and why Pinellas County and Tampa weren't included, especially since they view Pinellas as a significant source of nonpoint source pollution into Tampa Bay. The answer to this question relates to work done under a previous project by FSU and the FAU/FIU Joint Center that identified a limited study area in Tampa Bay and the Indian River Lagoon based on the confluence of plans developed for the SWIM, Aquatic Preserve, and local government comprehensive planning programs. The present study represents an attempt to examine a select group of local government comprehensive plans and land development regulations in these 2 study areas for the purpose of evaluating the extent to which they will be useful to DEP in preparing the state's plan for meeting the 6217 federal program requirements.

Discussion of SWFWMD activities in general, including:

Tampa Bay SWIM and NEP projects.

Primarily through the SWIM program, SWFWMD is working to establish pollution load reduction goals (PLRGs) for Tampa Bay. Their goals are to integrate:

1) Ongoing efforts by the consulting firm of Coastal Environmental to quantify PLRGs as part of the NEP (National Estuarine Program) effort;

2) a statistical analysis of pollution loads for Tampa Bay; and

3) modeling activities

These goals will be used to formulate an allocation strategy for pollution based on geographic area (political subdivisions).

They will try to establish mathematical load reduction goals based on the constituent pollutants. These goals will be used to formulate an allocation strategy for pollution based

on geographic area (political subdivision) and develop intergovernmental agreements to implement their recommendations. They plan to establish both interim and final goals, with the long-term objective of being able to define resource-based goals for reducing pollution of Tampa Bay (what levels of pollution reduction are necessary in order to re-establish a healthy scallop industry, etc.). [Note that nutrients are the key problem in Tampa Bay, which is NOT the case in the Indian River Lagoon area, e.g. excessive freshwater inflows into the St. Lucie estuary are a worse problem for the South Florida WMD]

Scott Stevens of SWFWMD is on the statewide Conventions Committee for stormwater management issues, one of seventeen such committees formed statewide to help the districts in their water resource planning process that culminates in 1994. He was recommended as the contact person at SWFWMD for any further questions about Tampa Bay pollution load reduction initiatives.

Activities relating to SWIM program for Tampa Bay.
SWFWMD's emphasis has been on retrofitting facilities such as local retention/detention ponds, developing enhancements for stormwater treatment, and increasing vegetation in littoral zones via planting programs. Most of their projects have been geared primarily toward "dirt turning." Although SWFWMD is developing PLRGs first for Tampa Bay as part of the SWIM program, they eventually will develop PLRGs for the rest of the district. They are starting to work toward uniform conventions for creating a methodology for doing this, and they are starting to work on PLRGs for Charlotte Harbor now (Gerald Morrison is their contact). Until they set specific reduction goals for a water body, all basins are presumed to have 80% of pollution removed by following "best management practices" as required by the district's rules. They also are looking at innovative controls of stormwater flows. For example, in an environmentally sensitive area adjacent to Cockroach Bay, the district bought some land together with Hillsborough County's local land acquisition program. They are now conducting a 3-year evaluation of their wet detention rule to check pollution reduction efficiency and how well things actually work on a portion of this property.

Discussion of SWFWMD review of local comprehensive plans

District staff has reviewed local comp plans and are currently reviewing plan amendments, but they don't review land development regulations (LDRs) and don't have enough staff to start doing this. They mainly evaluate comprehensive plans to determine what local

governments are doing in terms of pollution control. In their review and comment role on local plans, SWFWMD acts as an advisory agency to DCA. Under the scheme of Chapter 163, SWFWMD has no authority to enforce or change the comprehensive plans they review, they can only comment, although they have independent regulatory authority under Chapter 373 on many water management issues. SWFWMD also provides information to local governments who wish to change their stormwater regulations. For example, on the regulatory side, SWFWMD provides a manual with examples of good stormwater management practices, suggesting that if the local government follows the examples, then they are using Best Management Practices. In this role, they recognize the need to be realistic in making comments, e.g., comments should be those that locals are likely or able to implement. Local governments can not be expected to implement, incorporate into LDR's, or enforce all district recommendations. Monitoring is underfunded.

Currently working on a Level Of Service standard for water *quantity* and *quality,* in a matrix style, and there's a draft report available [ask Rand Fromm for a copy, he's doing the staff work for Planning]. Local plans currently employ LOS standards for drainage and stormwater that are only quantity oriented. The idea is not just to limit the amount of stormwater runoff but to regulate the quality of the water that constitutes runoff.

Agricultural uses

General rule —you meet state water quality standards if you design according to SWFWMD's standards & criteria for BMPs, defined in rules that were adopted in 1984. If your engineer follows these standards, you meet BMP's and the WMD will issue a permit without additional consideration. [SWFWMD criteria for BMP's are the same as those of the state; the district does not set higher standards] So there's 2 sets of situations for all land use and development activities in the district: pre- and post-1984 rules.

SWFWMD's permitting rules went into effect in 1984. If you are a pre-existing use (i.e., a water user before 1984), you are not required to seek a permit. If a pre-1984 water user changes a crop or a particular practice dramatically changing their use of water, the new use is not considered pre-existing and the individual landowner must apply for a use permit through the district. After a permitted activity is built, you get an operating permit.

New agricultural uses must have detention on site and the detention plan must either be designed by a professional engineer or must meet Soil Conservation Service (SCS)

standards. The permitting process for new (or changes to pre-existing) uses is: 1) you must have an engineer conduct the design study, 2) there must be a plan to capture and treat water runoff, 3) you must undergo plan submittal, review, completeness and a site visit. The WMD then monitors through either water uses/consumption or through permit/activity changes. [All consumptive use permits (CUPs) are metered—the district pays for most of it—so that's probably the best way to find out about crop changes and the need for a permit. Who is regulated? For consumptive use permits (water withdrawals), all well water pipes over 6" diameter or users of over 100,000 gallons per day are required to be permitted. The permits are renewed every six to ten years.]

Also, their technical people go out into field to inspect agricultural permit sites every one and one half to 2 years. A PE has to certify continued functioning of S/W structures; district staff have just started to do follow up inspections. Staff is limited—1 person in the district does agricultural permits and exemptions [actually, 1 agricultural engineer and 1 environmental scientist]. The district requires as-built drawings for all structures permitted. There was a comment about an audit that discusses some of the enforcement problems that the district has had.

Discussion of initiatives in Hillsborough County.

Their comprehensive plan calls for a monitoring and control program for agricultural operations, especially near water bodies. Problem: their stormwater management plan is due by 1996, in the meantime they don't know where all structures are located in some basins.

Hillsborough County is involved in retrofitting existing systems to ensure water quality; they talk about doing a lot of retrofitting, including water quality projects, using money derived from their stormwater utility (a funding convention to make landowners pay based on the amount of their impervious surface, e.g. so much for a S/F residence etc.). Also, the district has a cooperative basin program with local governments including Hillsborough County to fund project work. Hillsborough County is getting aggressive regarding water quality and stormwater, more so in nonpoint source reduction than the state requires; their Environmental Protection Commission helps a lot, too (developers have to meet S/W criteria, although the Commission doesn't issue a separate permit). Hillsborough County's ELAPP (Environmental Lands Acquisition and Protection Program) allows them to buy land (Cockroach Bay for example), which is critical to successful retrofit projects. The county has a few monitoring programs.

Discussion of initiatives in Manatee County.

Little talk of retrofitting. No discussion of agriculture beyond BMP's, they simply follow the BMPs of SWFWMD and the Soil Conservation Service (SCS). Manatee County's Comprehensive plan is much more surface water/reservoir consumption based. There has been some work on special stormwater overlay districts with special regulations (relating to SWFWMD initiatives). For example, Manatee County has adopted 2 zoning overlay districts regarding Lake Manatee and --?-- that address nonpoint source management. Manatee County also has created a stormwater utility.

Forestry

If the proposal meets the state's BMP's for silvaculture, SWFWMD will allow the project. Apparently, exemptions are quite common for forestry use and agriculture. In the case of an exemption, the WMD issues a letter stating "no permit required."

Urban

Some local governments will be able to address these nonpoint source issues but most local governments depend on the district for nonpoint source pollution control. Generally, local governments are not exceeding district standards, although they are allowed to. Local governments often make final building permits contingent on getting a SWFWMD permit or an exemption letter, although a district permit is not often required. SWFWMD doesn't have enough staff to review local site plans. They once tried to do this with Hillsborough County for several months, but it was too time-consuming for them to continue this practice.

Most local governments are more interested in flood attenuation (some local ordinances say that you can't exceed pre-development runoff volume) than water quality protection. The WMD would rather have volume sensitive standards because these standards would lead indirectly to better quality just because less volume is discharged.

The WMD would like to link the district with local governments in some meaningful way with regard to water policy planning. In the big picture, the district needs to establish PLRG numbers, then figure out how to work together with local governments to reduce pollution loadings, including finding the money to do it and participating in cooperative projects with local governments (regulations alone won't solve the problem). Local

governments today seem apprehensive about NPDES and changes in state water policy. They tend to hold back on cooperative projects these days until they see what the new mandates will be.

The overall general impression of the WMD personnel attending the meeting was that some local governments are ahead of the curve on non-point source pollution and some are behind.

Some discussion was offered about SWFWMD role in the DRI process. As the DRI process is changing, the RPCs may get more involved as a forum for conflict resolution. There are 4 RPC's within SWFWMD's jurisdiction. The district has one coordinator who meets with other administrators around the area to put together comments for the RPC and DCA. Their comments tend to be in 4 major areas: water supply, water quality, flood protection, and natural systems. [NOTE: there's no surprise here, these are simply the 4 main categories for their district-wide resource planning effort, e.g. just a convenient way to organize water management issues] Any DRI must meet stormwater standards that are equal to those of the WMD. One of the problems with this is that some DRI developers simply say that they'll meet district standards, and often don't go beyond that.

Often, strong comments made by the WMD on a DRI are taken into account by the RPC and DCA. However, sometimes it's hard for the district's planning staff to exceed the requirements of their regulatory staff when commenting on DRIs and making suggestions for avoiding water-related problems during the planning process. The WMD often provides a list of potential alternatives to the local government, especially in the context of wetlands. In fact, SWFWMD's most common and critical recommendations deal with the need to be more stringent in relation to wetlands protection. Cumulative impacts of development was mentioned in passing as an additional problem.

For highway construction, often smaller cities or counties rely upon the state DOT to provide for stormwater, since they can't afford to do otherwise. The local governments let the runoff from their roads go into the DOT engineered systems. These systems must still be permitted by SWFWMD. DOT usually takes into account a wider area when planning the retention in these cases, and their standards seem stringent enough for the WMD.

Discussion of designs for urban runoff control. District staff advocates use of basin-wide treatment alternatives, e.g. have 1 big system of large lakes or ponds which are monitored

by the municipality to treat/maintain water quality. They think this is preferable to many tiny treatment systems (for every 7-11 etc.) which are taken care of by individual landowners. They feel that there is a need for a change of orientation, and they encourage regional systems. Problem with this idea: how do you identify a specific polluter? Tracing a pollution source in the small pond case would be easier from the standpoint of liability. Actually, you probably need both; in theory, the NPDES permitting system will give some control over small point source polluters who are messing up a regional facility

Miscellaneous information.

1) NPDES (national pollutant discharge elimination system) regulates piped pollution as well as nonpoint source pollution; 2) there are 98 local governments within SWFWMD's area; 3)SWFWMD has a comp plan library in Brooksville that has all proposed and most adopted local comp plans within the district; 4) they only received approximately 20% of adopted plans initially, but adopted versions of local comp plans are starting to come in now with comp plan amendments; 5) local governments have been slow in actually implementing SWFWMD recommendations.

Marinas

The WMD does not generally get involved in this area unless the marina is tied into a large subdivision development. Permitting for marinas is mostly done by DEP. The marina usually ties into the existing municipal water system, so they don't need a consumptive use permit. Generally there's a long review process required—DEP may take years to permit new marinas, and it's hard to get their approval.

Hillsborough County has, by a special act of the legislature, a county Environmental Protection Commission (EPC). Their EPC may review marinas, and their plan says that they will develop a water quality monitoring program.

Hydromodification

The district has very little to do with this, e.g. they do not address issues relating to shoreline structural modifications, and they deal with dams only very infrequently. The only active example they could think of was a situation at Lake Grady, which is located south of Brandon in Hillsborough County; a dam kept failing (it was old, and was built before the district's rules went into effect in 1984). The district tried to help by getting

homeowners to take over maintenance responsibility, but its present status was unclear. A dam at Lake Manatee is another dam under WMD authority, but it also was built prior to 1984.

The district permits the digging of channels, and the WMD is in charge of determining what a jurisdictional wetland is. As a district, they're not into flood relief via structural alterations anymore, as they were in the past. Staff gave a brief history of how SWFWMD started out in 1961 as a flood control/drainage relief agency. At one time they were the local sponsor of a big Corps of Engineers' flood control project called the 4 Rivers Basin project. Water management philosophies have changed in Florida since then, and SWFWMD has transitioned out of this area.

Assessment of local comprehensive plans and land development regulations

Are local governments doing what they should be doing in setting policies consistent with the WMDs?

The WMD does not feel that there is any overt conflict between their agency and the local governments in their district. Local comp plans are generally consistent with district policies and rules, and it's in the best interest of a local government to be consistent or stronger than the WMD because they usually have pressing local water/stormwater problems. It also puts the onus of dealing with the WMD on the developer.

As a result of the 1985 growth management legislation, in 1987 the district established a program for local government assistance; they provide technical assistance to local governments on floodplain management, lake management, and water conservation. The WMD developed technical assistance documents to help governments write comprehensive plans, and the district provides both formal and informal (e.g. before a formal review cycle) review of the plan and plan amendments. They also have four Governmental Affairs Coordinators (GACs) that serve as local government liaisons throughout the district (under Ed Hogan). The GACs deal more with local elected officials, and they offer the first line of coordination with local governments on cooperative projects. The GACs attempt to keep a dialogue going between local governments and the district, and they also help local governments comply with WMD mandates.

SWFWMD also has eight local basin boards, and there is a Basin Planner assigned to each. Each basin board has a cooperative funding program to help finance local projects, including stormwater quality improvement projects and master planning. Each basin's funding program is based upon the particular millage rate that is set for that basin. Wes Wheeler oversees all basin plans and activities. SWFWMD requires a 50% local match on all jointly-funded basin specific plans.

Hillsborough stormwater program—there's a group of stormwater staff in the planning department, plus there are also people in Engineering Services who work on NPDES, and the EPC deals with stormwater as well, e.g. local responsibilities for stormwater issues in Hillsborough County are fragmented, in part due to the different functional responsibilities involved, e.g., planning, permitting, facility design/construction/maintenance, etc. They will send an organizational chart for the district.

Summary Notes:

1. Pollution loading reduction goals have been set in Tampa Bay.
2. Pinellas County is the largest source of nonpoint source pollution in the Tampa Bay area.
3. Scott Stevens is lead person in SWFWMD pollution load reduction effort.
4. There are three separate work efforts underway to model water quality in Tampa Bay.
5. The district is working on major Tampa Bay pollution load reduction initiatives.
5. The district is developing numerical goals for load reduction by constituents, (especially nutrients).
6. The district is developing an allocation strategy for load reduction by constituent for each jurisdiction.
7. The district is developing resource-specific numerical goals (e.g. for scallop fisheries).
8. They are also working for uniform methodology for measuring pollution reduction outside of the Tampa Bay SWIM area.
8. The district is developing methods including retrofitting facilities, enhancements for stormwater treatment, and littoral zones.
9. Gerald Morrison - environmental scientist doing water-quality sampling in Tampa Bay.
10. There is a perception of redundancy in policy and efforts among NEP, NPDES, and DEP.
11. Comp Plan could be one place to tie together local and WMD plan implementation.
12. It is not realistic for WMD's to provide oversight authority for development of LDR's by local governments.

13. The district is working on a uniform LOS for water quantity and quality in Comp Plan.
14. SWFWMD has manual of BMP's.
15. Agricultural- hard to monitor pesticides - permits issued at the front end.
16. Permitting authority depends on the status of an activity as of 1984. Pre-1984 users considered pre-existing and are exempt from permitting requirements.
17. Water use permits are required for wells over 6 inches in diameter and over 100,000 gpd water withdrawals.
18. Water use permits are issued only when consumption comes from surface or from groundwater, not when tied into a city system.
19. Agriculture is a primary area of emphasis for WMD because agricultural activities and sites usually involve water being taken directly from aquifer.
20. Apparently exemptions are quite common for forestry use and agriculture.
21. Changing crops triggers change in water requirements, therefore a permit is required, but hard to monitor otherwise—can use aerial photos.
22. As-builts are required for all SW structures and modifications.
23. Local governments are not exceeding standards, although they are allowed to. If the applicant meets BMP standards, whether in agricultural activities, forestry or DRIs, they are free to proceed.
24. There has been little talk of the cumulative effects of many small projects that all meet standards.
25. Manatee County is not doing retrofitting, Hillsborough is.
26. Both Hillsborough and Manatee counties have created stormwater utilities.
27. SWFWMD reviews and comments on DRIs.
28. The DOT systems that most local governments let their road runoff flow into must be permitted by SWFWMD and are regarded as being of high quality.
29. SWFWMD advocates regional retention of stormwater at the end of the line instead of the construction of many small ponds.
30. There are four RPC's within SWFWMD's jurisdiction.
31. Marinas are reviewed by DEP, not SWFWMD—long review process required—hard to get approval.
32. SWFWMD created a Technical Information Planning Series for local governments in the areas of:
    - floodplain management
    - lake management
    - water conservation
33. SWFWMD has Government Affairs Coordinators who are liaisons assigned to work with local elected and appointed officials.
34. There are eight basins in SWFWMD and there is a Basin Planner assigned to each.
35. SWFWMD has a Cooperative Funding Program with local governments which provides a 50% match.
36. The overall general impression of the WMD personnel attending the meeting was that some local governments are ahead of the curve on non-point source pollution and some are behind.

Other Observations:

SWFWMD staff expressed honest confusion about how our effort related to several overlapping programs (NEP, NPDES, SWIM, DEP) and to their programs. This is understandable.

The SWFWMD's level of intent was good and level of effort seemed high. Another strong point is how they had organized themselves with liaisons for local governments and with planners that address basin-level planning issues. It would be useful to review an organization chart and an annual report of some kind.

It seemed very useful to establish numerical goals for pollution reduction and then allocate pollution reductions among local governments. It also seemed like a good idea to set resource-specific water quality goals. Several other points seemed to be their strong permitting authority and the presence of local stormwater utilities for financing needed improvements.

The foregoing does not indicate how effective SWFWMD is in accomplishing stormwater management. This could come either from some sort of data collection, or from interviews from others in the community. Perhaps we could gain some perspective from interviews with local government planners, farmers, foresters, and developers to improve our perspective.

Overall, the weak links seem to be: 1) there is little or no direct connection between SWFWMD programs and the Comp Plans/LDR's of member local governments, other than the review process and their technical assistance program; and 2) the current regulation of the five areas outlined in 6217 (g) is through a complex matrix of state, federal, local, and special purpose agencies. Lines of accountability are unclear to people on the front lines.

It is tempting to conclude that item 1) of the preceding comment would be addressed through a revision of 9J-5 and/or ICE to explicitly spell out the responsibility of local governments to implement the appropriate 6217 (g) measures. Likewise, it seems like the state and federal agencies will have to create an explicit division of labor and accountability administering the 6217 program in a way that explicitly integrates this program with NEP, SWIM, and NPDES. Without this, local governments could either give-up or become hostile in their frustration.

Meeting notes from FAU/FIU Joint Center NPS research team's visit with staff from South Florida Water Management District, December 1, 1993

Location: South Florida WMD office, West Palm Beach

SFWMD
David Thatcher, Director, Comprehensive Planning Division
Frank Lund, Project Manager, Indian River Lagoon SWIM Plan
Dean Powell, Upper District Planning

DEP
Dick Williams

FSU, Homer Hoyt Center for Land Economics and Real Estate
Jim May

FAU/FIU Joint Center for Environmental and Urban Problems
Patty Metzger
Robert Lincoln
Nanciann Regalado

1. Dave discussed the water management district's development of its strategic plan. This plan will be part of the statewide water management planning process which focuses on 17 major issues. One of these issues is management of surface water quality. The most difficult part of this issue is developing regulations for retrofitting older drainage systems. Retrofitting will require more funding than is available. However, the district has been able to provide matching funds for several retrofits with the Government Assistance Program. This program has been used to fund both SWIM and non-SWIM projects. The district attempts to apply new construction standards and criteria to funded retrofit projects, but sometimes the requirements exceed available funds. They try to construct the best project they can with funds available.

2. Jim presented an overview of the development of a Coastal Nonpoint Control Plan, in compliance with Section 6217 and described Homer Hoyt and Joint Center's scope of work.

3. Agriculture Issues

These are driven by the SWIM plan. Chapter 17-40, FAC, requires that Pollution Load Reduction Goals (PLRGs) be adopted for all SWIM plans. In the Indian River Lagoon (southern portion) study area, the district is currently developing PLRG aimed at maintaining salinity and appropriate freshwater pulses from Lake Okeechobee discharged into canals and eventually the lagoon. This will, hopefully, control sediment and nutrient levels in lagoon. South Florida is the first district to define freshwater as a pollutant. Currently, the district's best fix on stormwater is through regulation of timing of discharges and reasonable conveyance times.

Once the PLRGs are set, the district will need to institute BMPs for groves and farms that drain into district canals. Most of these agricultural activities were operating and drainage systems built before district rules took effect in late 1970s/early 1980s. Current permits are not needed unless farmers want to make major changes to their drainage systems. The adoption schedule for PLRGs must be set next year.

Our setting of PLRGs in St. Lucie River Estuary exceeds all similar efforts to date throughout the state.

4. Forestry Issues

No forestry or silviculture activities occur in study area.

5. Urban Issues

The district does not regulate onsite sewage disposal systems, but they do have impacts on lagoon.

District issues permits for dewatering on construction sites.

District regulates surface water discharges, point and nonpoint. Chapter 17-40 requires that 80 percent of pollutants be treated; 95 percent of pollutants must be treated if discharging into Outstanding Florida Waters. This requirement does not receive adequate monitoring and enforcement due to lack of staff and level of urban activity in South Florida region. Until about one year ago, district approved permit for a new project if designing engineer

was certified. Monitoring was limited to flyovers. The district generally presumed that BMPs were being carried out. Inspections are conducted by municipal officials but they generally do not inspect for drainage/water quality. The district does not go on-site to monitor land use practices. The landowner provides water quality monitoring information to the district. Monitoring will improve once PLRGs are set.

District is currently analyzing data to compare on-site water quality with water quality in the lagoon.

Most of the local comprehensive plans include policies to manage stormwater and adopt, implement master plans. These plans initially only identified deficiencies in monitoring and provided and inventory of facilities. The funding is not available to follow through on these policies. The district is providing incentives to local governments for cost-sharing. Only one local government in the study area has declined to do so. These matching programs will be our best handle on local retrofit problems.

Three problems exist with respect to local stormwater management plans. One, the local governments are hesitant to create the funding source (i.e., stormwater utility) needed to implement the plan. Two, the plans that have been drafted resemble enhanced drainage plans rather than water quality plans. The expertise in this area is limited to non-existent at the local level. Three, no local government can meet the standards and criteria with retrofit projects due to physical (and financial) limits. The district recognizes the limits with retrofit projects and generally looks for increased permeability and improved groundwater recharge.

Existing development presents the bigger problem. Seventy percent of the sub-basins draining into the lagoon were developed prior to the adoption of stormwater regulations. The district can regulate what's being discharged into district canals and structures, which were designed for capacity, not biological targets. NPDES will ultimately drive local retrofit and stormwater management. Palm Beach County must apply for NPDES permit and Martin and St. Lucie will have to apply eventually.

The district will use GIS to compare land uses and their contribution to water quality degradation.

6. Marina and Recreational Boating Issues

The district issues permits for surface water for landside activities in marinas. There are no publicly owned marinas in this area. Do not predict any new marinas in the area and will concentrate on existing marinas. Experiencing water quality problems in Manatee Pocket due to contamination from painting boat bottoms.

7. Hydromodification Issues

Palm Beach and Martin counties enforce mangrove protection ordinances for shoreline protection.

The district has been successful in reconnecting impounded marshes along lagoon.

The district is currently working to improve canal maintenance.

Chapter 5

Local Comprehensive Plan Amendment Analysis

Task 3. Analyze all comprehensive plan amendments relative to how they relate to agriculture, forestry, urban, marinas and recreational boating, and hydromodification NPS issues.

Work product 3.1 — draft summary report

The following discussion describes the methodology employed to determine the number of local comprehensive plan amendments that have been filed in the Tampa Bay and the Indian River Lagoon study areas. The Department of Community Affairs maintains a library of all local government comprehensive plans as well as all local plan amendments. DCA records all changes in local government planning activities (e.g. amendments) on a tracking sheet. This computer-generated document is periodically updated. The tracking sheet is a necessary first step in determining the amendment activity of a jurisdiction.

There are some problems with the tracking sheets that prevent them from being used as a final source of data regarding amendment activity. Two primary problems involve time lags and double counting. Time lags become a problem because the tracking sheets record amendments as soon as they arrive at DCA. Often these amendments must go through a series of reviews and, as a result, are unavailable in the library. Although not a hard and fast rule, it seems as though there is a time lag of up to six months or more. A bigger problem is double counting. Double counting results when an amendment comes in for review at the end of a year. For example, an amendment arriving in December 1991 may be recorded as amendment 91-1. Because it is not approved until 1992, it will also be recorded as amendment 92-1. Double counting on the DCA tracking sheets is a problem.

In order to eliminate the effects of the double counting, each individual amendment submission must be reviewed. Amendments are housed in the DCA library and arranged by local government jurisdiction, along with their respective comprehensive plans. Each amendment submission is organized in two flex-folders and one legal-sized file folder.

The legal-sized folder includes a chronological outline of the amendment history from submission to final status. While this folder is useful in determining the nature of the amendment, it does not include much detail. One flex-folder contains the proposed amendment and all assorted maps and preliminary documentation. Another flex-folder contains the text of the adopted amendment, the ORC report and other agencies input as well as the adopted local ordinance. The ORC report, the DCA staff memo summarizing the amendment, and the actual local ordinance were used in the amendment review that was conducted for this project.

It should be noted that what are recorded as amendments are in actuality amendment packages. For example, amendment 92-1 for Manatee county includes 5 future land use map amendments and 4 text amendments. Amendments can be divided into five general categories including, 1) amendments (whether a map or a plan element) submitted in order to bring a comprehensive plan into compliance, 2) land use map amendments, 3) policy or text amendments, 4) small scale amendments and, 5) DRI's. The attached tables show the number of amendment packages that were submitted to DCA from 1989 to the present from the fourteen local governments in our two study areas. These fourteen jurisdictions were selected from a previous research project and comprise the Tampa Bay Study Area and the Indian River Lagoon Study Area for purposes of this project. This chart helps assess the amount of activity/ land use change in these jurisdictions. The data source used is the DCA tracking sheets. As mentioned previously, the tracking sheets list annual activity for all jurisdictions in the state. The sheets list the amendment code which indicates the year in which the amendment "counts," as well as the type of amendment (regular, small scale, DRI, or remedial). The data for 1990 and 1989 were listed together, but it is possible to determine the year in which each amendments applied. Only after the Spring of 1992 are remedial amendments indicated as such. As a result, amendments occurring before this date may have been remedial amendments but were not accordingly recorded on the tracking sheets. Finally, the 1993 data includes activity up until August, 1993. Special attention has been paid to eliminate the effects of double counting.

A preliminary review of stormwater-related amendments to the local comprehensive plans involved in the two study areas of this project follows as the next section of this chapter. Amendments for the Tampa Bay study area and for the Indian River Lagoon study area are presented separately. The chapter concludes with an outline that shows the section headings found in the file folders used for comprehensive plan amendments at DCA. This will afford the reader the opportunity to see how these files are organized, as well as a general idea of the materials that are included in them.

TOTAL NUMBER AND TYPE OF AMENDMENT PACKAGES SUBMITTED FOR EACH JURISDICTION IN THE TWO STUDY AREAS:

Jurisdiction	1993	1992	1991	1990	1989
Hillsborough County	1 Regular	2 Regular	2 Regular	2 Regular	0
Manatee County	1 Regular	2 Regular 1 Sm. Scale	2 Regular 1 Sm. Scale	2 Regular	0
City of Palmetto	1 Sm. Scale	0	1 Regular	2 Regular	0
Palm Beach County	1 Regular	2 Regular 1 Remedial	2 Regular 1 Sm. Scale 1 DRI	2 Regular	0
Martin County	2 Regular	1 Regular	2 Regular	1 Regular	0
St. Lucie County	0	2 Regular 1 Sm. Scale	2 Regular	1 Regular	0
Jupiter	1 Regular 1 Sm. Scale	2 Regular 1 Sm. Scale	1 Regular	0	0
Tequesta	1 Regular	1 Regular	1 Regular	0	0
Jupiter Inlet Colony	0	0	1 Regular	0	0
Jupiter Island	0	0	1 Regular	0	0
Ocean Breeze Park	0	0	0	0	0
Sewall's Point	0	0	0	0	0
Fort Pierce	0	1 Regular	0	0	0
Stuart	1 Regular 2 Sm. Scale	1 Regular	2 Regular 1 Sm. Scale	0	0

Comprehensive Plan Amendments: Tampa Bay Study Area

Hillsborough County

Seven amendments to the Hillsborough County Comprehensive Plan were reviewed with respect to their relevance to nonpoint source pollution issues. Of those seven, three appeared to be significant for further consideration in this study.

Amendments to the Hillsborough Comprehensive Plan include a stormwater retrofit provision which extends the deadline to retrofit existing facilities from 1992 to 1993. The county is trying to implement the EPA-mandated Clean Water Act's NPDES program for stormwater facilities, and the revision is intended to allow full implementation by providing time to complete the necessary work for compliance.

Proposed amendments to the Comprehensive Plan approved by the Planning Commission (8/7/90) include changes to the stormwater management element that are intended primarily to expand or clarify existing language. In addition, new definitions of three terms have been proposed as a result of comments expressed by the Department of Community Affairs during plan review.

Adopted amendments to the plan include changes to the Capital Improvements Program that are related to stormwater management projects scheduled in the plan. These changes would lead to better implementation of stormwater projects for nonpoint source pollution.

Manatee County

The Manatee County Comprehensive Plan has had nineteen amendments approved. Among these amendments is Ordinance 92-11, a map amendment, which includes adding a corridor study area consisting of all water of Sarasota Bay bounded on the north by the Cortez Bridge and on the south by the Manatee-Sarasota County line, to evaluate the environmental, social, and future funding possibilities of an additional Sarasota Bay crossing.

Also included in the amendments is Ordinance 92-40 which revises many of the implementation mechanisms relating to the Conservation and the Coastal elements of the plan. Policy 3.2.1.12 is amended to require that any existing agricultural and land development activities within the WO-M and WO-E Overlay Districts which generate, dispose, or store either hazardous waste or materials in excess of 220 lbs., or acutely hazardous waste materials in excess of 2.2 lbs., for any month shall submit an Emergency Response Plan which includes the location of any storage areas/structures to permit evaluation of the site for compliance with Policy 3.2.1.11.

Amendments to the Coastal element include an amendment to the implementation mechanism of policy 4.1.2.6 to state that the Environmental Action Commission of Manatee County shall review dredge and fill applications for construction or widening of artificial waterways for compliance with the Public Facilities element with regard to specified drainage improvements. In amending the implementation mechanism of Policy 4.1.2.8, the Manatee County Planning, Permitting and Inspections Department, in coordination with the Florida Department of Natural Resources and the Environmental Action Commission of Manatee County, will review all proposed development applications adjacent to the Terra Ceia Aquatic Preserve. The implementation mechanism of Policy 4.1.2.11 requires that the Environmental Action Commission of Manatee County identify known water pollution sources within the Coastal Area and require submittal of a water quality management plan which includes monitoring and implementation provisions within six months of issued notice.

All other approved amendments to the comprehensive plan of Manatee County are land use amendments or map amendments.

City of Palmetto

No amendments.

Town of Jupiter

In late 1990 the Town of Jupiter submitted two proposed land use amendments (Amendment 91-1) to DCA:

1. (Amendment #6 - MacArthur Foundation): Changing a 146 acre parcel from Palm Beach County Residential (3-5 d.u./acre) to the Town of Jupiter Residential (5-8 d.u./acre) and changing a 119.7 acre parcel from Palm Beach County Residential (3-5 d.u./acre) to the Town of Jupiter Industrial (Hi-Tech). The ORC Report included objections relating to the protection of natural resources.

2. (Amendment #9 - Weizer): Changing a 228.4 acre parcel from Palm Beach County Residential (1-3 d.u./acre) to the Town of Jupiter Industrial (Hi-Tech). The ORC Report included objections relating to the protection of natural resources.

Relevant comments from a March 20, 1991 memo regarding the Town's response to the ORC report are:

> Identified Problem
> Amendments 6 and 9, which allow industrial uses in an area near or adjacent to the C-18 Canal and the Loxahatchee Slough/River Corridor, are not supported by an analysis which addressed the impacts of the industrial uses proposed on these natural resources. In addition, the data and analysis supporting the amendments do not demonstrate that they are consistent with Objective 1.2 to maintain water quality in the Loxahatchee Slough/River Corridor and Objective 1.4 to maintain current level of surface water quality.
>
> According to staff at the Treasure Coast Regional Planning Council, the lands included in amendments 6 and 9 drain into the C-18 Canal and possibly into the Loxahatchee River...
>
> In addition, SFWMD states that amendment 9 is a concern to the District due to the potential for adverse environmental impacts. The Loxahatchee River/Slough Corridor is a designated "Save Our Rivers" project which is designed to protect and manage the only federally designated "Wild and Scenic River" in Florida. In a phone conversation with staff at SFWMD, the District's staff objects to the industrial land use designations (amendments 6 and 9) because these amendments are adjacent to conservation and environmentally sensitive areas...

Recommended Corrective Action
Include an analysis of the impact of proposed land use designations on the area's natural resources. The analysis must include the impacts of stormwater run-off and pollutant loading to surface and groundwater based on the most intensive use allowable for the industrial land uses...

Status: based on a telephone conversation (12/9/93) with Martin Hodgekins, Director of Planning, Town of Jupiter, the town will attempt to enter into a stipulated agreement with DCA in order to adopt this land use change. Part of the agreement will include Conservation Element Policy changes that would ensure protection of the natural resources.

Amendment 92-1 (June 4, 1992 memo to file):

In order to address the land use incompatibility issue above, the Town of Jupiter proposed Conservation Element amendments:

2) A minimum 100-foot buffer along all portions of private property abutting the corridor, and the requirement for an environmental assessment to accompany development applications which will address issues of significance to the protection of the corridor (new Policy 1.2.8).

5) The prohibition of fences, walls, and similar barriers from being installed within the Corridor/buffer/preserve areas, but permitting such barriers to prevent or eliminate public access into the Corridor/buffer/preserve areas (new Policy 1.2.11),

6) The requirement for hazardous waste management and disposal plan for all properties used for nonresidential purposes which abut the Corridor (new Policy 1.2.12),

7) The prohibition of the use of septic tanks on properties abutting the Corridor (new Policy 1.2.13),

8) The requirement for the development and implementation of a stormwater management plan for all properties directing abutting the Corridor (new Policy 1.2.14)...

DNR and TCRPC had objections to 1.2.8 and 1.2.11.

Status: based on a telephone conversation (12/9/93) with Martin Hodgekins, Director of Planning, Town of Jupiter, the town will attempt to enter into a stipulated agreement with DCA in order to adopt this land use change. Part of the agreement will include changes in

the Conservation Element Policy that would ensure protection of the natural resources.

Deferment of the Drainage Study, Master Plan, and Stormwater Management Ordinance (92-1)

Amendment #IN-2 delays until 1993 the completion of the drainage study and the master plan. Amendment #CN-2 delays until 1993 the adoption and implementation of the Town's Comprehensive Stormwater Management Ordinance.

> Identified Problem
> Amendment #CN-2, relating to Policy 1.4.3 in the Conservation Element delays until 1993 the adoption and implementation of the Town's Comprehensive Stormwater Management Ordinance. However, s.163.3202(1) and (2) (d), F.S., requires that the Town's land development regulations address drainage and stormwater management, within one year after submission of the plan to the Department for review.

Status: not adopted.

Martin County

Amendment 91-2 changes the land use for two parcels totaling 263 acres to allow for the development of a privately -operated resource recovery and disposal facility and construction debris landfill. The land is currently vacant and covered with high quality native pine flatwoods and wetlands... Under the county plan, 75 of the acres are to be designated as wetland preserve. Less that 100 acres of the site may be used for development when considering wetland, upland and buffer preserve requirements of the plan. The upland portions of the site provide moderate recharge to the surficial aquifer... The FDER has indicated that the soils on the site have either poor or severe limitations for Class III landfills and for the cover of landfills. The county hydrologist has indicated that if the site was developed as proposed, that the county would require a liner and separate monitoring wells to ensure the protection of water resources. According to the data, these are not normally required for Class III materials.

> Identified Problem
> Within the context of reviewing the land use change to general institutional, and the types of uses allowed in this category, (e.g. landfills) are inappropriate due to the presence of extensive wetlands and upland vegetation... The wetlands on this site are part of a larger County system and therefore, from a land use perspective should not be considered in isolation. The County is relying on the development agreement and the

permitting requirements to address any of the above-identified concerns, however, the permitting process does not consider the cumulative impacts of development on the larger natural systems which may be affected.

Recommended Corrective Action
Revise the land uses for the parcels to be based on the suitability of the site for the land uses allowed within the designated land use category and to be compatible with the natural resources on site and their preservation

Status: Based on a telephone conversation with Nicki van Vonno, Comprehensive Planning Administrator, (12/14/93), in process of negotiating amendment with DCA.

Jupiter Island
No amendments

Jupiter Inlet Colony
No amendments

Village of Tequesta
No amendments

Palm Beach County
No amendments

St. Lucie County

In early 1990, St. Lucie County adopted a plan amendment (91-01) to change the wording of several policies related to urban sprawl and upland habitats. These amendments implemented the stipulated settlement agreement between the county and the Department of Community Affairs (DCA) over its finding that the county's comprehensive plan as adopted was not in compliance with the requirements of Chapter 163, Part II, Florida Statutes. The upland habitat amendments made the plan consistent with the Treasure Coast Regional Planning Council's policy that 25% of upland habitat be preserved. This may aid in preventing surface water pollution by providing reduced impervious surface and runoff as well as increased nutrient uptake.

In addition, St. Lucie County has proposed or adopted other amendments that relate to land use designations, amendments 91-004, 92-1,92-S1, and 92-2. No adverse comments on

Outline - DCA Amendment Files Section Headings

I. FORMAT REVIEW PHASE

A Local Government Transmittal Letter - Proposed Amendment

B. Rule 9J-11 Checklist

C. Request for Additional Information (if applicable)

D. Notice of Receipt to Local Government

E. Transmittal Letters to External Review Agencies

Department of Transportation
Department of Environmetnal Regulation
Department of Natural Resources
Department of State
Game and Fresh Water Fish Commission (for counties)
County (for cities)
Department of Agriculture (for counties)
Regional Planning Council
Water Management District
Division of Emergency Management (for coastal communities)

II. INITIAL REVIEW PHASE (Part 1)

A. Comments from External Review Agencies

III. INITIAL REVIEW PHASE (Part 2)

A. Community Profile

B. Objections, Recommendations and Comments Report

C. Transmittal Letter to Local Government

D. Transmittal Letters to External Review Agencies

the potential for adverse environmental effects are contained in the reviews of those amendments, though there were objections based on sprawl, infrastructure and coastal policies.

City of Stuart

The City of Stuart apparently has initially adopted several comprehensive plan amendments relating to land use designations. While objections were raised to at least one of the amendments based on a failure to analyze infrastructure demands that would be created by the amendment, the amendments do not appear to have the capacity to significantly affect non-point discharges.

City of Ft. Pierce

The City of Fort Pierce has also adopted land use designation amendments. Again, objections seem to be focused on a failure to analyze infrastructure issues rather than on environmental issues including surface water quality.

City of Ocean Breeze Park

No amendments

City of Sewall's Point

No amendments

IV. COMPLIANCE REVIEW PHASE

A. Local Government Transmittal Letter - Adopted by Amendment

B. Adoption Ordinance

C. RPC Comments - Adopted Amendment

V. PUBLICATION OF NOTICE OF INTENT

A. Transmittal Letter to Newspaper

B. Proof of Publication

VI. COPIES TO EXTERNAL AGENCIES

A. Memos to External Agencies

VII. COMPLIANCE DETERMINATION

A. Staff Evaluation Report

B. Transmittal Letter to Local Government

C. Notice of Intent

D. Statement of Intent (if applicable)